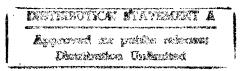
Water Conservation Study (Water and Energy) Energy Engineering Analysis Program (EEAP) FY94S Fort Knox, Kentucky

Final Report
Volume 2 of 3

CONTRACT #DACA01-94-D-0034 SYSTEMS CORP PROJECT #94013.03 DECEMBER 30, 1994





DEPARTMENT OF THE ARMY

CONSTRUCTION ENGINEERING RESEARCH LABORATORIES, CORPS OF ENGINEERS
P.O. BOX 9005
CHAMPAIGN, ILLINOIS 61826-9005

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Marie Wakeffeld,

Librarian Engineering

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ECIP PROJECT 4

FY94S WATER CONSERVATION STUDY (WATER AND ENERGY), FT. KNOX, KY

This section contains the project description and the DD1391 forms for ECIP Project FH-4, Conservation improvements to 452 Non-Family Housing Buildings. Two lists of the buildings included in the project follow the DD1391 forms. The first list includes all buildings considered in the project in numerical order. The second list shows which buildings were used to model unsurveyed buildings. Following these lists are the LCCID report and the cost estimate for the proposed project. Calculation sheets for the individual buildings follow the project cost estimate. Below is a detailed index of the information included in this section.

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Catalog Cut Sheets/Product Information	
Project Cost Estimate	
Building Calculation Sheets	

DATE:

22 December 1994

PROJECT NO.:

ECIP-4

PROJECT TITLE:

Water Conservation Improvements to 452 Buildings

INSTALLATION:

Fort Knox

LOCATION:

Kentucky

PRIMARY FACILITY

Metering Valves, Flush Valves and Aerators

\$1,713,000

ESTIMATED CONTRACT COST	\$1,415,273
CONTINGENCY PERCENT (10%)	141,527
SUBTOTAL	1,556,800
SUPERVISION, INSPECTION & OVERHEAD (5%)	77,840
DESIGN COST	77,840
TOTAL REQUEST	1,712,480
TOTAL REQUEST (ROUNDED)	\$1,713,000

Replace flush valves and faucets in 452 buildings with water saving flush valves, metering valve faucets, and install faucet aerators. The project will significantly reduce potable water consumption and sanitary waste production.

DATE:

22 December 1994

PROJECT NO.:

ECIP-4

PROJECT TITLE:

Water Conservation Improvements to 452 Buildings

INSTALLATION:

Fort Knox

LOCATION:

Kentucky

PROJECT:

Replace flush valves at water closets and urinals with water saving flush valves, replace faucets at lavatories with metering valve faucets and install faucet aerators in 452 buildings.

REQUIREMENTS:

Fort Knox utilizes inefficient outdated flush valves and faucets in its buildings. The existing flush valves and faucets consume significantly more water and generate greater quantities of sanitary waste per flush than necessary. The existing inefficient systems place greater demand on the water table, water treatment plant and waste treatment plant. The U.S. Army Corp of Engineers, Louisville District, contracted an Energy Engineering Analysis Program (EEAP) Water Conservation Study of the Post. The study identified energy and water conservation opportunities. Life cycle cost analysis was performed on each opportunity to determine its discounted savings-to-investment ratio (SIR) and estimated payback period. This project has a SIR of 3.68 and a simple payback period of 4.12 years. The project exceeds the minimum requirements of an SIR greater than 1.25 and a simple payback of less than 10 years.

CURRENT SITUATION:

The buildings at Ft. Knox have inefficient flush valves and faucets and lack aerators at many sinks. The buildings consume more water and generate more sanitary waste than is necessary. The new flush valves, faucets and aerators will greatly reduce the water consumption and waste generated.

IMPACT IF NOT PROVIDED:

If this project is not implemented, 452 buildings will continue to consume more water and generate more waste than necessary. The U.S. Army will fail to realize an estimated \$415K in annual savings (FY95\$) and a total discounted savings of \$6.3M during the twenty year life of the project.

ADDITIONAL:

A life cycle cost analysis was performed on the project. The project will realize water savings of over 3.6 times the initial investment cost and will pay for itself in less than 4.2 years.

Ft. Knox is not on the list of installations considered for closure or realignment.

DATE:

22 December 1994

PROJECT NO.:

ECIP-4

PROJECT TITLE:

Water Conservation Improvements to 452 Buildings

INSTALLATION:

Fort Knox

LOCATION:

Kentucky

SECTION 11 - ECONOMIC ANALYSIS DATA

11D ECONOMIC JUSTIFICATION SUMMARY

This water conservation project is recommended for funding. A life cycle cost analysis was performed on each portion of this project and on the overall project. The overall project will realize water savings of over 3.6 times the initial investment cost and will pay for itself in less than 4.2 years.

TABLE 6.1 ECIP 4 - NON-FAMILY HOUSING

18	610	2339	4548
70	613	2350	4555
72	850	2351	4769
73	851	2352	5014
79	853	2368	5047
80	855	2369	5217
82	888	2371	5220
94	1002	2381	5223
98	1017	2385	5232
100	1020	2422	5252
101	1054	2425	5253
119	1055	2426	5256
121	1117	2608	5915
158	1118	2723	5916
171	1131	2730	5917
236	1138	2754	5918
261	1173	2755	5919
296	1174	2756	5920
		2757	5921
400	1176	2762	5922
469	1308	2762 2763	5922 5923
482	1321		5924
483	1359	2764	
484	1391	2765	5925
485	1392	2766	5926
486	1393	2767	5927
501	1394	2770	5928
502	1467	2778	5932
504	1468	2786	5933
509	1474	2787	5934
511	1476	2788	5935
512	1487	2789	5936
514	1531	2806	5937
523	1532	282 7	5938
524	1539	2942	5939
526	1541	2943	5940
531	1543	2944	5941
532	1544	2955	5942
534	1547	2958	5950
			5951
538	1549	2960	6010
539	1595	2961	6011
540	1609	2963	6012
548	1610	2964	6013
549	1720	2969	6014
550	1724	2970	6015
552	1726	2971	6017
557	1730	2972	6018
567	1810	2973	6113
568	1996	2974	6114
569	1997	2979	6115
573	1998	2980	6116
608	2010	4014	6117
609	2020	4250	6118
003	2020	TAU	0110

		(244	(000
6142	6625	6744	6888
6143	6628	6747	6889
6144	6629	6748	6892
6145	6631	6751	6894
6146	6637	6758	6897
6147	6652	6761	6901
6291	6655	6803	6902
6293	6656	6804	6906
6294	6659	6807	7007
	6660	6808	7011
6335	6662	6811	7012
6401		6812	7014
6402	6663	6814	7015
6536	6664		7016
6537	6665	6815	7017
6539	6670	6816	7017 7019
6541	6671	6817	
6542	6672	6820	7020
6543	6673	6821	7021
6544	6675	6822	7022
6546	6676	6823	7024
6547	6679	6825	7025
6548	6680	6826	7028
6550	6683	6829	7029
6551	6687	6830	7031
6552	6690	6833	7035
6555	6691	6837	7036
6556	6694	6839	7038
	6695	6840	7038
6557	6698	6843	7041
6558	6699	6844	7043
6560		6847	7044
6561	6700	6848	7049
6562	6702	6851	7050
6563	6705		7054
6564	6706	6852	7055
6568	6708	6855	
6571	6709	6856	7057
6573	6713	6859	7058
6574	6714	6860	7067
6576	6715	6861	7068
6577	6718	6863	7070
6580	6721	6865	7071
6581	6722	6866	7074
6587	6725	6867	7075
6590	6726	6870	7077
6592	6728	6871	7078
6597	6729	6873	7079
6602	6730	6874	7080
6605	6731	6875	7082
6607	6733	6876	7083
	6736	6879	7084
6611	6738	6880	7085
6616	6739	6881	7087
6617		6882	7088
6620	6740		7091
6623	6741	6884	1031
6624	6743	6885	<u> </u>

TABLE 6.2 BUILDINGS MODELED BY SURVEYED BUILDINGS

BUILDINGS SURVEYED AND CALCULATED	BUILDINGS ASSUMED TYPICAL OF SURVEYED BUILDINGS
18	
70	
72	
73	
79	
80	
82	
94	
98	
100	
101	
119	
121	
158	486, 2730
171	
400	
469	-
485	482, 483, 484, 5232
501	
502	
850	
851	
853	·
855	
888	6401, 6861
1002	

1017	532, 1020
1054	
1055	,
1117	
1118	
1131	
1138	
1173	
1174	
1176	5014, 6402, 6870
1308	
1321	
1359	
1392	1391, 1394
1393	
1467	
1468	
1487	
1531	
1532	1539
1541	1543, 1544, 1549, 6901
1609	
1610	
1720	
1724	
1726	
1730	
1810	
1996	
1997	

1998	557, 7103
2010	
2020	
2339	5932, 5935
2352	
2368	
2369	
2385	••
2425	1547, 1548, 2350, 2351
2426	1595
2608	1474
2723	
2764	236, 573, 608, 609, 610, 2762, 2763, 2765, 2766, 2767, 2786, 2787, 2788, 2789, 7238
2770	
2778	
2943	2942
2955	2960, 2961, 2964, 2971, 2972, 2973, 2974, 2979, 2980, 6113, 6115, 6116, 6118, 6576
2958	2944
4014	
4250	
4548	
4555	
4769	
5217	
5220	
5223	
5252	
5253	
5256	

5916	
5917	5915, 5940, 5942, 6012, 6018
5918	6587
5920	5919, 5921, 5922, 5936, 5937, 5938, 5939, 6010, 6011, 6015, 6017
5925	2422, 5924, 5933, 5934, 6013, 6014
5926	5923, 5950, 5951
5927	
5928	
6117	2959, 2963, 2969, 2970, 6114, 6577
6147	6142, 6144, 6145, 6902
6291	9181
6335	
6537	
6539	296, 1476, 2371, 2381, 6731
6541	6548, 6550, 6557
6544	
6546	6542, 6543, 6547, 6551, 6552, 6555, 6556, 6558
6568	
6571	
6574	6573
6581	5941, 6580
6590	
6592	6143, 6146
6597	
6607	
6611	
6616	
6617	
6620	
6629	6605, 6623, 6624, 6625, 6628

((2)	
6631	6655, 6656, 6659, 6660, 6662, 6663, 6664, 6665, 6671, 6672, 6673, 6675,
6670	6676, 6679, 6680, 6694, 6694, 6695, 6698, 6699, 6700, 6702, 6705, 6706, 6709, 6718, 6721, 6722, 6725, 6726, 6733, 6736, 6739, 6740, 6743, 6744,
	6747, 6748, 6751, 6804, 6807, 6808, 6811, 6812, 6814, 6815, 6816, 6817,
	6820, 6821, 6822, 6823, 6825, 6826, 6829, 6830, 6830, 6839, 6840, 6843, 6844, 6847, 6848, 6851, 6852, 6855, 6856, 6859, 6860, 6866, 6867, 6871,
	6873, 6874, 6875, 6876, 6879, 6880, 6881, 6882, 6884, 6885, 6888, 6889, 6892, 7007, 7011, 7012, 7014, 7015, 7016, 7017, 7019, 7020, 7021, 7022,
	7024, 7025, 7028, 7035, 7036, 7038, 7039, 7043, 7044, 7049, 7050, 7054, 7055, 7057, 7058, 7067, 7068, 7070, 7071, 7074, 7075, 7077, 7078, 7079,
	7080, 7082, 7083, 7084, 7085, 7087, 7088, 7091, 7092, 7094, 7095, 7998
6758	
6837	
6863	
6894	
6897	2755, 2757, 6561, 6564
7029	
7031	6803
7041	6536, 6708, 6865
7104	6293, 6294, 6687, 6715
7392	
7393	261, 504, 509, 511, 512, 514, 523, 524, 526, 531, 534, 536, 538, 539, 540, 548, 549, 550, 552, 567, 568, 569, 6602, 6637, 6652, 6683, 6690, 6691, 6713, 6714, 6728, 6729, 6730, 6738, 6741
7425	613, 2754, 2756, 2806, 2827, 6560, 6562, 6563, 6906
7738	
7741	
7955	
7956	
7959	
9261	
9306	
9308	
9309	

STUDY: ECIP-4 LCCID FY95 (92) ENERGY CONSERVATION INVESTMENT PROGRAM (ECIP) INSTALLATION & LOCATION: FT KNOX REGION NOS. 4 CENSUS: 3 PROJECT NO. & TITLE: ECIP-4 NON-FAMILY HOUSING PROJECT FISCAL YEAR 1995 DISCRETE PORTION NAME: WATER ANALYSIS DATE: 12-30-94 ECONOMIC LIFE 20 YEARS PREPARED BY: DERRINGTON 1. INVESTMENT A. CONSTRUCTION COST \$ 1556800.

B. SIOH \$ 77840.

C. DESIGN COST \$ 77840.

D. TOTAL COST (1A+1B+1C) \$ 1712480. E. SALVAGE VALUE OF EXISTING EQUIPMENT \$ 0. F. PUBLIC UTILITY COMPANY REBATE 0. G. TOTAL INVESTMENT (1D - 1E - 1F) 1712480. 2. ENERGY SAVINGS (+) / COST (-) DATE OF NISTIR 85-3273-X USED FOR DISCOUNT FACTORS OCT 1994 UNIT COST SAVINGS ANNUAL \$ DISCOUNT DISCOUNTED \$/MWH(1) MWH/YR(2) SAVINGS(3) FACTOR(4) SAVINGS(5) \$/ MWH(1) FUEL A. ELECT \$ 46.40 B. DIST \$.00 C. RESID \$.00 D. NAT G \$ 10.51 0. 15.08 0. 0. \$ 0. \$ 0. \$ 33107. \$ 0. \$ 0. \$ 33107. 0. 3150. 0. 0. 0. 18.57 0. 0. 21.02 0. 33107. 18.58 615119. 0. 16.83 E. COAL \$.00 F. PPG \$.00 0. 0. 17.38 0. 0. 0. 14.88 M. DEMAND SAVINGS 3150. 615119. N. TOTAL 3. NON ENERGY SAVINGS(+) / COST(-) 296600. A. ANNUAL RECURRING (+/-) (1) DISCOUNT FACTOR (TABLE A) 14.88 (2) DISCOUNTED SAVING/COST (3A X 3A1) \$ 4413408. B. NON RECURRING SAVINGS (+) / COSTS (-) SAVINGS(+) YR DISCNT DISCOUNTED

COST(-) OC FACTR SAVINGS(+)/

(1) (2) (3) COST(-)(4)

\$1712480. 10 .74 1267235. ITEM 1. REPLACEMENT 1267235. \$1712480. d. TOTAL C. TOTAL NON ENERGY DISCOUNTED SAVINGS (+) / COST (-) (3A2+3Bd4) \$ 5680643. 4. FIRST YEAR DOLLAR SAVINGS 2N3+3A+(3Bd1/(YRS ECONOMIC LIFE))\$ 415331. 4.12 YEARS 5. SIMPLE PAYBACK PERIOD (1G/4) 6. TOTAL NET DISCOUNTED SAVINGS (2N5+3C) \$ 6295762. 7. SAVINGS TO INVESTMENT RATIO
(IF < 1 PROJECT DOES NOT QUALIFY) (SIR) = (6 / 1G) =3.68 **** Project does not qualify for ECIP funding; 4,5,6 for information only. N/A8. ADJUSTED INTERNAL RATE OF RETURN (AIRR):

LIFE CYCLE COST ANALYSIS SUMMARY

WELLWORTH THE PC TOILET



- Water-saving 1.5 gallon flush.
- Features Pressure-Clean™ flushometer tank system.
- Three-bolt quick connect system with factory-installed tank gasket and bolts.

K-3458 Wellworth Lite PC Toilet, vitreous china, 1.5 gallon flush. Closecoupled design with elongated bowl. Minimum roughing-in is 12" (305 mm).

Tank/bowl combination includes K-4333 bowl, K-4470 vitreous china tank with Kohler 81100 flushometer tank system, K-4471 tank cover and K-9434 chrome-plated trip lever.

IMPORTANT—For most satisfactory operation, a minimum static water pressure of 25 P.S.I. is required at the toilet supply inlet.

Recommended Seats and Supply K-4650 Lustra™ solid plastic seat with open front and cover.

K-4652 Lustra solid plastic seat with closed front and cover.

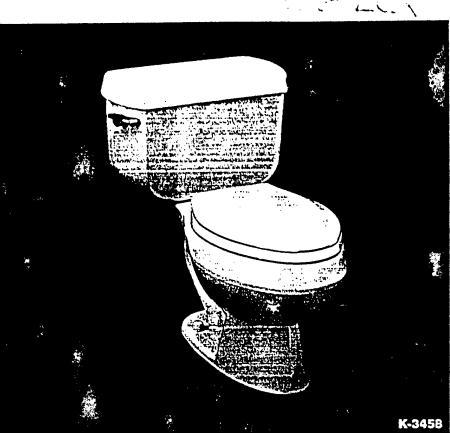
K-4670-C Lustra solid plastic seat (K-4681-C Black Black™) with open front and check hinge.

K-7637 %" angle supply with stop.

Tank Locks—Add suffix "-T" to product number.

Bedpan Lugs—Add suffix "-L" to product number.

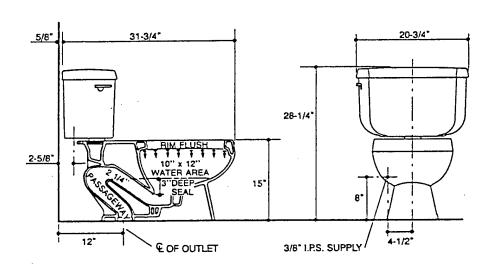
For complete color selection, see Colors section.



Wellworth Lite PC Toilet and Lustra seat (K-4652) in White.



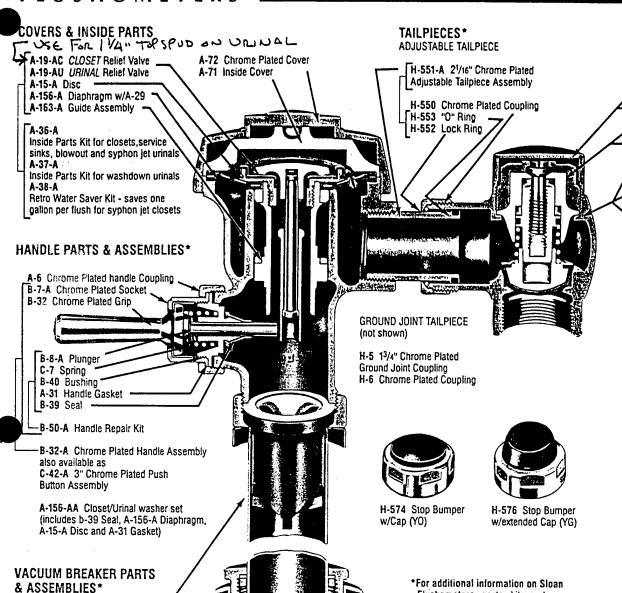






SLOAN

FLUSHOMETERS



*For additional information on Sloan Flushometers, parts, kits and assemblies, please refer to the Repair Parts and Maintenance Guide.

CONTROL STOPS*

SCREWDRIVER STOPS

→H-573 1" Chrome Plated Stop Cap =H-582 3/4" Chrome Plated Stop Cap =H-579 1" Bonnet =H-577 3/4" Bonnet

-H-577 3/4" Bonnet [H-500-A 1" or 3/4" Chrome | Plated Screwdriver BAK-CHI | Control Stop |-H-500-AG 1" or 3/4" Chrome

Plated Screwdriver BAK-CHE Control Stop H-650-AG 1" Chrome Plated

NH-650-AG 1" Chrome Plate Screwdriver BAK-CHEK Control Stop

H-541-A Repair Kit for 1" Screwdriver BAK-CHEK Control Stop H-543-A Repair Kit for 3/4" Screwdriver BAK-CHEK Control Stop

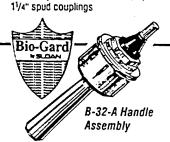
WHEEL HANDLE STOPS (not shown)

H-36 Chrome Plated Screw w/H-52 Washer H-575 Chrome Plated Wheel Handle H-556 Sound Absorbent Washer

3308060 Wheel Handle Repair Kit

H-563 1" Bonnet
H-561 3/4" Bonnet
H-600-A 1" or 3/4" Chrome
Plated Wheel Handle
BAK-CHEK Control Stop
H-650-AG 1" Chrome Plated
Wheel Handle BAK-CHEK
Control Stop

H-541-A Repair Kit for 1"
Wheel Handle BAK-CHEK
Control Stop
H-543-A Repair Kit for ³/4"
Wheel Handle BAK-CHEK
Control Stop



V-500-A & V-500-AA Chrome Plated Vacuum

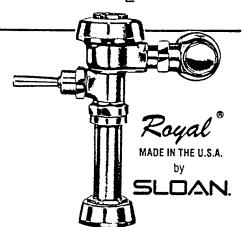
Breaker Assm. & Vacuum Breaker Repair Kit

F-5-A 11/2" Chrome Plated Spud Coupling

Assembly. Also available for 3/4", 1" and

A Protective Coating that Effectively Controls Bacteria, Mold & Fungus!

ANTI-MICROBIAL ADDITIVE REGISTERED WITH THE E. P. A.



ORDERING INSTRUCTIONS

To place an order, for your convenience and assistance, contact your local Sales Representative. A list of area representatives are on the back of this price sheet.

Exposed Flushometers with YB Variations (Sweat Solder Adaptor)

When ordering Flushometers with the YB Variation you may obtain the kit in two ways:

1) packed with the Flushometer-

2) packed seperate-

For Example:

For Example:

ROYAL 110-3 YB

Order Code Number:

ROYAL 110-3 and Sweat Solder Adaptor

Order Code Numbers: 3010193 & 3308780

Hydraulic Flushometers

When ordering Hydraulic Flushometers the Actuator must be specified and ordered seperately.

For Example:

ROYAL 910 YB

Order Code Number:

3910180

3010194

HY-33-A FW Actuator

Order Code Number:

0318001

Concealed Flushometers

When ordering Concealed Flushometers please specify the "L" Dimension and/or the Wall Thickness.

Also, please note if it is a Standard Concealed Installation or if it is to be used with a Wall Box Installation. If it is to be used with a Wall Box Installation, the Wall Box must be ordered seperately:

*On the Flushometer use the description only. DO NOT use the Code Number.

For Example:

*ROYAL 152 8" WALL THICKNESS FOR WALL BOX INSTALLATION

WALL BOX ASSEMBLY

Order Code Number: 0334030

Sioan Flushometers can be furnished to provide the following flush volumes to meet the requirements of all plumbing fixtures (new and existing) and code jurisdictions:

MUST HAVE ZOW CONSUMPTION" FIXTURE

WORK PROPERTY — NOT ENOUGH WATER

Closet Flushometers

Closet Flushometers

Closet Flushometers

A-36-A A-38-A

c) Low Consumption (specify by using *-1.5" suffix) 1.6 GPF

A-41-A

Urinal Flushometers (for 3/4" spud Urinals)

A-37-A

Urinal Flushometers (for 11/4" spud Urinals)

a) Standard 3 GPF b) Water Saver (specify by using *-1.5* suffix) 1.5 GPF

Sloan Flushometers are designed, manufactured and tested to the requirements of ASSE 1037 and ASME/ANSI A112.19.6M

Allowances for Parts Omitted

Each Flushometer listed in this price sheet has its own corresponding code number. When any part is omitted in your selection the code number will change, therefore, order using the full description less any references to code number.

Note: For other parts omitted allow 1/3 of net price of part.

ITEM	ALLOW
F-101 Outlet	.25
F-20 Spud Nut	.25
F-7 Spud Flange	.15
F-7 Wall Flange	.15
Control Stops	2.20
Vacuum Breakers	2.15

A 19277 163-A CHANGES	ECN 512 11-01-67 AN ECN 718 06-09-70 GF ECN4097 12-16-91 MH		CADD MIE 12-16-91	163 19 PATE: 10-3
				ROYAL GUIDE ASSEMBLY OR. ABN TR. CHKD. APPR. RB SLOAN VALVE CO. FRANKLIN PARK. IL.
aTY.				A-163-A 103-A 103-A 103-A 103-A 103-A 103-A 103-A
				UNLESS OTHERWISE SPECIFIED FRACTIONAL = ±1/64* DECIMAL .XX = ±.000* ANGLIAR = ± 2* CONCENTRIC = .010TIR
DESCRIPTION GUIDE FLOW RING			NOTE: REVERSE A-170 WHEN FURNISHED FOR 3 GAL. URINAL.	
A 18989 A 18990 A 18990	108070		-170 WHEN . URINAL.	
A-163 A-170		•	NOTE: EVERSE A- OR 3 GAL.	
No.	ר		<u> </u>	PAGE 6-17

AUG-1	30-1	1994	1 9:4	1 5	FROM	SLO	AN VAL	LVE			TO	CR	DUCH K	NOXU	LLE			P.0	03/	005	
 7	A 30220	CHANGES		11W 16-61-71											CADD	12-16-91	-	- 1	A 36226	152-A	DATE 12-16-91
			Θ													AM STATE	WATER SAVER	COIDE	Ę		SLOAN VALVE CO.
OTY.	-		-		* *	1			5		(2)	\					HISE USED ON	/64*	±.010°	.005.	torin
NC		16	HEAD) 211				22.27		SECTION A-A	UNLESS OTHERWISE SPECIFIED	FRACTIONAL = ±1/64	DECHAM, XX = 4.	DECIMAL XXX = 1.005	CONCENTRIC = .01071R
DESCRIPTION			REFILL H		A			٠	•												
DRWG No.	A 18989	A 18990	B26789																		
Д.	A-163	A-164	A-170-1																		
No.	-	2	m						<u></u>		···		_						f	AGE.	6-10

ALIG-	30-19	994	ā:	45 FR0	M SI	LOAN	JALLIE			ΤQ	CROUCH	1 KND	XVLLE		P	. 004	1/005	
A 36225	1	CHANGES	NPR0 164	12-13-91 N#+									CADD	12-18-91 or. NH hom! K	1 - 1 -	A 36225		18-01-71
		-1 1	9											JAN 1 0 59%	LOW CONSUMPTION	DR. WH TR.	CD. MRS APP. C	FRANKLIN PARK. IL.
QTY.						(1	3) 	2			-			UNLESS OTHERWISE USED ON SPECIFIED	FRACTIONAL * ±1/64"	DECIMAL XXX = 1.005 DECIMAL XXX = 1.005 ANGULAR = 1.005 COMMENTRIC = 0.00TR	=======================================
DESCRIPTION	GUIDE	FLOW RING	REFILL HEAD												UNIESS	FRACTIONA	DECIMAL .X DECIMAL .X ANGULA	
DRWG No.		A 18990	A32531															
PART No.	A-163	A-164	A-179															
ITEM No.	-	2	3							<u> </u>							PAGE 6-1	19- -

.», --...

AUG-30-1994 9:44	FROM SLOAN VALUE	то	CROUCH KNOXVLLE	P.002/005
A 36227 153-A CHANGES NPRO 164 12-13-91 MH			CADD DATE 12-16-91	SCALE: 1:1 A A 36227 153-A I2-16-91
				DR. MH TR. CHYD. MRS AFPR. CSA SLOAN VALVE CO FRANKLIN PANK. R.
OTY.	2			USED ON
DESCRIPTION GUIDE REFILL HEAD				UNIESS OTHERWISE SPECIFIED FRACTIONAL = ±1/64* DECIMAL .XX = ±.010* CECIMAL .XX = ±.010* CECIMAL .XX = ±.010* CONCENTRIC = .010TIR
DRWG No. A 18989 B23957				
PART No. A-163 A-170				
No.				PAGE 6-20

manager of the second

Mixing Valves to Supply Tempered (110°F) Water to Metering and Conventional Single Lever Faucets.

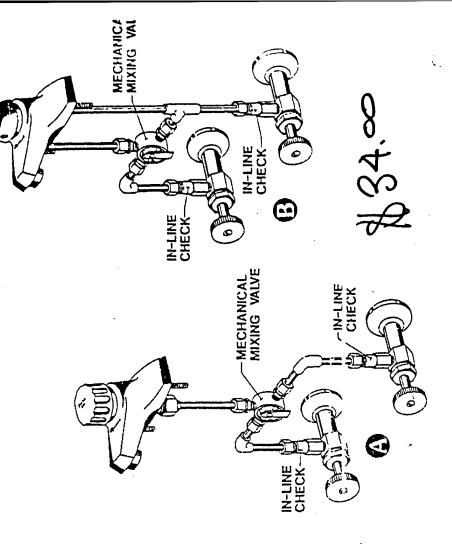
Mechanical Mixing Valve for tempered water supply to an individual faucet. Adjustable temperature. Chrome finish.

44-10

Embersion Connections and in-line checks (no piping supplied).

A Metering Faucet illustrated with Mechanical Mixing Valve and Checks installed in hot and cold supplies feeding tempered water to faucet.

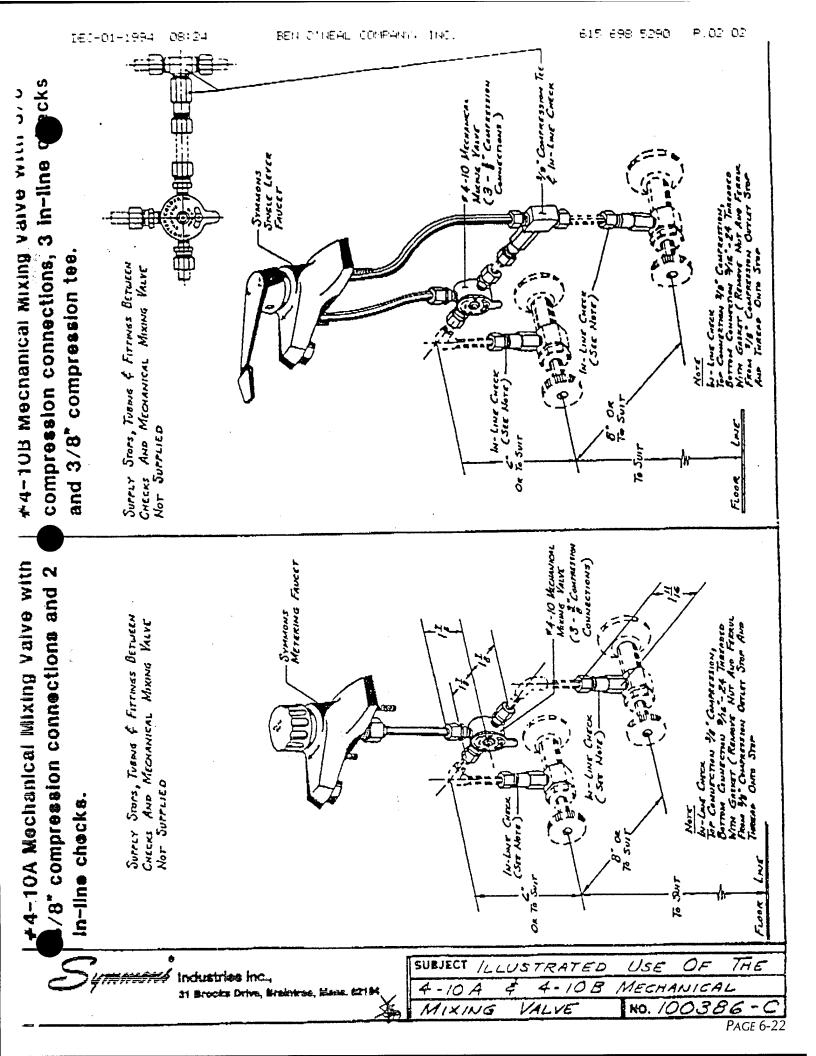
(ii) Conventional Single Lever Faucet illustrated with Mechanical Mixing Valve and Checks installed in hot and cold supplies feeding tempered water to hot inlet of faucet.





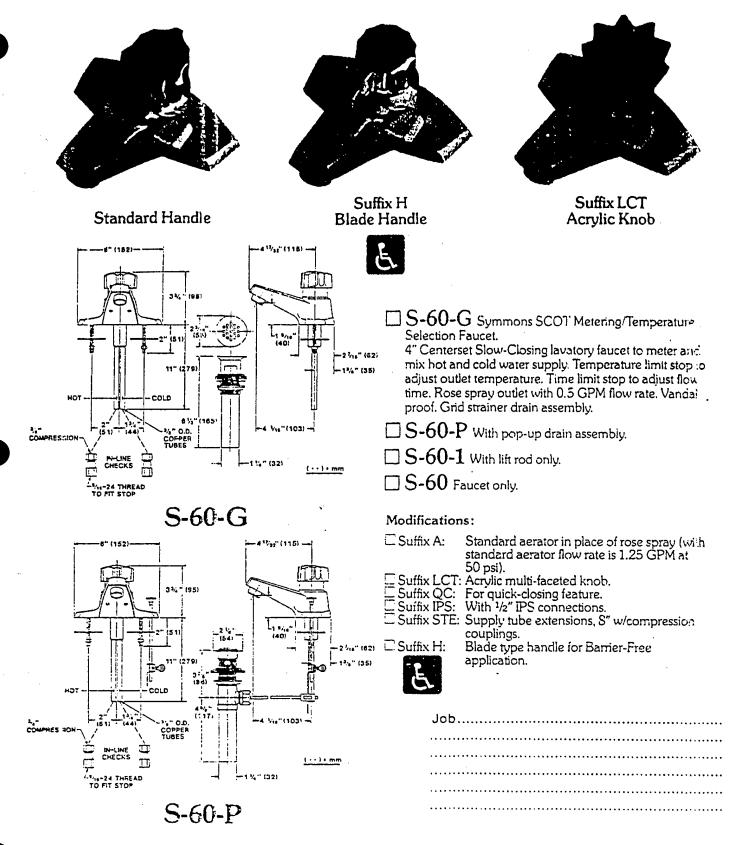
Ressure Balancing Mixing Valve for tempered water supply to a group of faucets. Flow rate 8 GPM @ 45 p.s.i. will supply up to 16 faucets @ 0.5 GPM flow rate. Adjustable formorature. Chrome finish

₩₽. 1981-75-97 SI:



Slow-Closing Omni Temperature LAVATORY FAUCET

The metering faucet with temperature selection





______ ECO-1, 2, 3, 4, & Date: 22-Dec-94 Estimate: UPGRADE FAUCETS, WATER CLOSETS, & URINALS Description: LIMITED EEAP (WTR) Bid Date: Project: FORT KNOX, KY Job #: Location: MULTI BLDGS City indx:Louisville, KY Sq. footage: Description _____ Manhours Matl Labor Equipment ______ 1511410972 ECO - 3INSTALL 3.5 GAL FLUSH VALVE REPAIR KIT , INCL DEMO, IN WATER CLOSETS 2965.00 Ea. Unit values 1.24 15.00 35.04 0.00 0.00 50.04 Totals 3676.60 \$44,475 \$103,905 \$0 \$0 \$148,380 ECO - 4 INSTALL 1.0 GAL FLUSH VALVE REPAIR KIT 1511410972 IN URINALS INCL DEMO, 1635.00 Ea. 0.00 53.04 Unit values 1.24 18.00 35.04 0.00 2027.40 \$29,430 \$57,297 \$0 \$0 Totals \$86,727 INSTALL AERATOR, LAVATORY FAUCET 1511412810 ECO - 2 202.00 Ea. Unit values 1.00 7.08 0.00 0.00 0.25 8.08 \$0 \$0 Totals 50.50 \$202 \$1,429 \$1,631 1511412810 ECO - 1 INSTALL SPRING LOADED LAVATORY FAUCET AND MIXING VALVE INCL DEMO OF EXISTING 3358.00 Ea. 0.00 Unit values 2.50 139.00 65.00 0.00 204.00 \$466,762 \$0 \$218,274 \$0 Totals 8395.00 \$685,036 INSTALL AERATOR, EQUIPMENT RELATED FAUCET 1511412810 ECO - 6 34.00 Ea. 7.08 0.00 0.00 Unit values 0.25 1.00 8.08 Totals 8.50 \$34 \$241 \$0 \$0 \$275 INSTALL NEW WATER SAVING WATER CLOSET, TANK TYPE, 1521801100 ECO - 3 FLR MNTD, 2PC WHITE W/ SEAT, 1.6 GPF 70.00 Ea. 114.30 0.00 0.00 Unit values 4.02 235.00 349.30 \$0 \$24,451 Totals 281.40 \$16,450 \$8,001 \$0 1531607360 VORTEX SHEDDING INSERTION FLOW METER SIXTEEN INCH (16") 4.00 Ea. 3000.00 677.51 0.00 Unit values 32.00 0.00 3677.51 \$14,710 Totals \$12,000 \$2,710 \$0 \$0 128.00 VORTEX SHEDDING INSERTION FLOW METER 1531607380 TWENTY INCH (20") 6.00 Ea. 5009.26 Unit values 48.00 4000.00 1009.26 0.00 0.00 Totals \$24,000 \$0 288.00 \$6,056 \$0 \$30,056 1531607400 VORTEX SHEDDING INSERTION FLOW METER TWENTY-FOUR INCH (24") 8.00 Ea.

30-Dec-94		MeansI	Data for Lot	us		Page 2
Jnit values Totals	64.00 512.00	4500.00 \$36,000	1361.70 \$10,894	0.00 \$0	0.00 \$0	5861.70 \$46,894
1574223300	WATER FLO	OW TOTALIZE	ER			_
Unit values Totals	16.00 288.00	2200.00 \$39,600	480.00 \$8,640	0.00 \$0	18.00 E 0.00 \$0	2680.00 \$48,240
1574223400	FIELD IN	TERFACE DEV	VICES			_
Unit values Totals	32.00 64.00	3800.00 \$7,600	960.00 \$1,920	0.00 \$0	2.00 E 0.00 \$0	A 4760.00 \$9,520
1574223500	CPU PENT	IUM 500 MB	HD 16MB RAM	I		
					2.00 E	
Unit values	8.00	4000.00	240.00	0.00	0.00	4240.00
Totals	16.00	\$8,000	\$480	\$0	\$0	\$8,480

Line #	Descript	ion	_			
	Manhours	Matl	Labor	Equipment	Sub	Total
	=======	========				
U15 MECHANICAL	15736	\$684,553	3419,847	\$0	\$0	\$1,104,400
1602051770	RIGID GA	LV STL, CONI	OUIT TO	15'H, 3/4",	W/2 4000.00	I.F.
Unit values Totals	0.10 400.00	ELB, 11 CLAN 1.48 \$5,921	2.38 \$9,526	0.00 \$0	0.00	3.86 \$15,447
1611552200	WIRE TEL	EPHONE TWIST	r PVC #2	2-2 C	(atv)	C.L.F.
Unit values Totals	0.80	10.65 \$0	19.05 \$0	0.00 \$0	0.00	29.70
1623107200	LO VOLT	CONTROL WIRE	E 2 COND	UCTOR	40.00	C.L.F.
Unit values Totals	1.27 50.80	11.46 \$458		0.00 \$0		41.77
U16 ELECTRICAL	451	\$6,379	\$10,738	\$0	\$0	\$17,117

Line #	Descripti	Lon				
	Manhours	Matl	Labor	Equipment	Sub	Total
=======================================		: = = = = = = = =				=========
ESTIMATE TOTAL	16187	\$690,932	\$430,585	\$0	\$0	\$1,121,517
SALES TAX MATL MARKUP	0.00% 0.00% 22.00%	\$0 \$0	\$94,729			
LABOR MARKUP EQUIPT MARKUP SUB MARKUP	0.00%		Ş94, 12 <i>3</i>	\$0	\$0	
TOTAL BEFORE COCONTINGENCY BOND PROFIT	ONTINGENC 15.00% 3.00% 10.00%	\$690,932	\$525,314	\$0	\$0	\$1,216,246 \$182,437 \$36,487 \$121,625
JOB TOTAL						\$1,556,794

Estimate: ECO-1, 2, 3, 4, & Date: 22-Dec-94

Description: UPGRADE FAUCETS, WATER CLOSETS, & URINALS

Project: LIMITED EEAP (WTR)Bid Date:

Location: FORT KNOX, KY Job #: 94013.03

Sq. footage: MULTI BLDGS City indx:Louisville, KY

Sq. Iootage:	MODIT					
=======================================	_======================================	SUMMARY				
	Manhours	Matl	Labor	Equipment	Sub	Total
=======================================	========	=======	=========			
U15 MECHANICAL U16 ELECTRICAL	15736 451	\$684,553 \$6,379	\$419,847 \$10,738	\$0 \$0	\$0 \$0	\$1,104,400 \$17,117
TOTAL	16187	\$690,932	\$430,585	\$0	\$0	\$1,121,517
SALES TAX MATL MARKUP LABOR MARKUP	0.00% 0.00% 22.00%	\$0 \$0	\$94,729	\$0		
EQUIPT MARKUP SUB MARKUP	0.00% 5.00%				\$0	
TOTAL BEFORE CONTINGENCY BOND PROFIT	ONTINGENC 15.00% 3.00% 10.00%	\$690,932	\$525,314	\$0	\$0	\$1,216,246 \$182,437 \$36,487 \$121,625
JOB TOTAL						\$1,556,794

	FY94S EEAP FT.		KNOX WA IR CONSERVATION STUDY	S NO	TUDY		1 2
	CALCL	CULAT	ULATION WORK SHEET 1			DATE:	31 Oct 94
FACILITY NO. :	18		FUNCTION:	(Laundry		
Occupancy:	The second secon		Operating Hours:	i			
ECO Number	Existing Fixture System	1 1	Retrofited Fixture System	٦		Fixtures	Water Leaks
ECO Type	Description	LPM	Description	LPM	HRS/YR	Quantity	Eliminated LPY
1 Lavatory Sinks	Public Lavatory	9.5	Spring Loaded Faucets	4.7	130	25	
FCO4 TOTAL.		MO		M		25	c
ECOI IOIAL.					-00,	3	
2 Misc. Sinks	Service Sink	15	Install Aerators	9.5	1095	7	
ECO2 TOTAL:		141		LPF	#FL/YR	2	0
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	1300	21	
Water Closets			Repair Kit				
ECO3 TOTAL:		LPF		LPF	#FL/YR	21	0
4	Wall Mounted Flush Valve	5.68	Install 1.0 GPF Flush Valve	3.79	1300	2	
Orinais			Nepall Mi				
ECO4 TOTAL:		LPM		LPM	HRS/YR	2	0
Shower Heads							
ECO5 TOTAL:		LPM		LPM		0	0
9							
Equipment							
Related							
ECO6 TOTAL:						0	0

Systems Engineering and Management Corporation, Knoxville, TN

SYSTEMS CORP

		FY9	FY94S EEAP		FT. KNOX W	ER CONSER	ER CONSERVATION STUDY	2 OF 2
Water Rate:			CA	LCULAT	IOM NOI	RK SHEET 2		
Gas Rate: 10.51 \$\text{ANVMH}\$ Demand Rate: \$\text{Attanual Energy Saving}\$	FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
Saving LPY KWH MWH Dollar Saving Saving LPX KWH MWH Dollar Saving Saving LPX KWH MWH Dollar Saving Saving LPX KWH MWH Dollar Saving Saving Saving 1,165,125 Saving Saving	<u>-</u>	Gas Rate:	1	\$/MWH		Demand Rate:		\$/KW
ks ELEC ELEC GAS Dollar Saving LP 1,165,125 0 0 \$483.53 \$511.52 1,165,125 0 0 3 \$483.53 \$511.52 2 \$0.00 3 \$483.53 \$511.52 3 \$483.53 \$510.00 \$20.00 5 \$3.00 \$20.03 \$20.36 45.740 0 0 \$43.05 \$43.05 45.14 \$2.04 \$2.04 \$2.04 \$2.04 4,914 0 0 \$0.00 \$0.00 4,914 0 \$0.00 \$0.00 \$0.00 4,914 0 \$0.00 \$0.00 \$0.00 4,914 0 0 \$0.00 \$0.00 4,914 0 0 \$0.00 \$0.00 4,914 0 0 \$0.00 \$0.00 4,914 0 0 \$0.00 \$0.00 4,914 0 0 \$0.00	ECO Number	Annual Water			Saving	WATER	Total	Total
ks 1,165,125 3 \$483.53 \$511.52 1,165,125 0 0 \$0.00 \$0.00 1,165,125 0 0 3 \$483.53 \$511.52 1,165,125 0 0 2 \$3.00 \$20.36 102,700 0 0 2 \$3.00 \$20.36 103,740 0 2 \$43.05 \$43.05 14 4,914 \$2.04 \$2.04 \$2.04 4,914 \$2.04 \$0.00 \$0.00 \$0.00 6 0 0 \$0.00 \$0.00 10 0 \$0.00 \$0.00 \$0.00 10 0 \$0.00 \$0.00 \$0.00	ECO Type			ELEC	GAS	Dollar Saving	Dollar Saving	Dollars Invested
ks 0 \$0.00 \$0.00 1,165,125 0 0 3 \$483.53 \$511.52 2 722,700 0 2 \$3.00 \$20.36 103,740 0 2 \$3.00 \$20.36 103,740 0 2 \$43.05 \$43.05 4,914 \$2.04 \$2.04 \$2.04 4 0 0 \$0.00 \$0.00 ds 0 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 \$0.00 t 0 \$0.00 \$0.00	1	12			3	\$483.53	\$511.52	\$6,120.00
1,165,125	Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
\$2 \$3.00 \$20.36 \$2 \$3.00 \$20.36 \$2 \$3.00 \$20.36 \$103,740 \$0 \$2 \$43.05 \$43.05 \$4,914 \$2.04 \$2.04 \$2.04 \$0 \$0 \$0 \$0.00 \$0.00 \$1 \$2.04 \$2.04 \$2.04 \$2 \$0 \$0 \$0.00 \$0.00 \$2 \$0 \$0 \$0.00 \$0.00 \$2 \$0.00 \$0.00 \$0.00 \$0.00	ECO1 TOTAL:	1.165.125	0	0	3	\$483.53	\$511.52	\$6,120.00
103,740	2	722,700			2	\$3.00	\$20.36	\$19.39
722,700 0 0 2 \$3.00 \$20.36 103,740 \$43.05 \$43.05 \$43.05 103,740 \$43.05 \$43.05 \$43.05 4,914 \$2.04 \$2.04 \$2.04 4,914 \$2.04 \$2.04 \$0.00 ds 0 0 \$0.00 t 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00	Misc. Sinks							
tts 103,740 \$43.05 \$43.05 \$43.05 103,740 \$43.05 \$43.05 103,740 \$52.04 \$52.04 \$2.04 \$2.04 4,914 \$52.04 \$2.04 \$2.04 \$2.04 0 0 0 0 \$0.00 \$0.00 \$0.00 t 0 0 0 0 \$50.00 \$0.00 t 0 0 0 0 \$50.00 \$0.00 t 0 0 0 0 \$50.00 \$50.00 t 0 0 0 0 0 0 \$50.00 \$50.00 t 0 0 0 0 0 0 \$50.00 \$50.00 t 0 0 0 0 0 0 \$50.00 \$50.00 t 0 0 0 0 0 0 \$50.00 \$50.00 t 0 0 0 0 0 0 \$50.00 \$50.00 t 0 0 0 0 0 0 0 \$50.00 \$50.00 t 0 0 0 0 0 0 0 \$50.00 \$50.00 t 0 0 0 0 0 0 0 \$50.00 \$50.00 t 0 0 0 0 0 0 0 \$50.00 \$50.00 t 0 0 0 0 0 0 0 \$50.00 \$50.00 t 0 0 0 0 0 0 0 \$50.00 \$50.00 t 0 0 0 0 0 0 0 \$50.00 \$50.00 t 0 0 0 0 0 0 0 \$50.00 \$50.00 t 0 0 0 0 0 0 0 0 \$50.00 \$50.00 t 0 0 0 0 0 0 0 0 \$50.00 \$50.00 t 0 0 0 0 0 0 0 0 \$50.00 \$50.00 t 0 0 0 0 0 0 0 0 \$50.00 \$50.00 t 0 0 0 0 0 0 0 0 0 \$50.00 \$50.00 t 0 0 0 0 0 0 0 0 \$50.00 \$50.00 t 0 0 0 0 0 0 0 0 0 \$50.00 t 0 0 0 0 0 0 0 0 \$50.00 t 0 0 0 0 0 0 0 0 0 0 0 \$50.00 t 0 0 0 0 0 0 0 0 0 0 0 0 0 \$50.00 t 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ECO2 TOTAL:	722,700	0	0	2	\$3.00	\$20.36	\$19.39
ts 103,740 \$43.05 \$43.05 4,914 \$2.04 \$2.04 \$2.04 0 0 \$0.00 \$0.00 \$0.00 t 0 0 0 0 \$0.00 \$0.00 t 0 0 0 0 \$0.00 \$0.00 t 0 0 0 0 \$0.00 \$0.00 \$0.00 t 0 0 0 0 \$0.00 \$0.00	3	103,740				\$43.05	\$43.05	\$1,261.01
103,740 \$43.05 \$43.05 4,914 \$2.04 \$2.04 4,914 \$2.04 \$2.04 0 0 \$0.00 ds 0 \$0.00 t 0 \$0.00 t 0 \$0.00 t 0 \$0.00 t 0 \$0.00	Water Closets							
4,914 \$2.00 \$0.00 <td< td=""><td>ECO3 TOTAL:</td><td>103,740</td><td></td><td></td><td></td><td>\$43.05</td><td>\$43.05</td><td>\$1,261.01</td></td<>	ECO3 TOTAL:	103,740				\$43.05	\$43.05	\$1,261.01
4,914 \$2.04 \$2.04 0 \$0.00 \$0.00 c \$0.00 \$0.00 c \$0.00 \$0.00 c \$0.00 \$0.00 c \$0.00 \$0.00	4	4,914				\$2.04	\$2.04	\$127.30
4,914 \$2.04 \$2.04 0 \$0.00 \$0.00 ds 0 0 \$0.00 t 0 0 \$0.00 t 0 0 \$0.00 t 0 0 \$0.00	Urinals							
ds	ECO4 TOTAL:	4,914				\$2.04	\$2.04	\$127.30
13.	2	0			0	\$0.00	\$0.00	\$0.00
00.0\$ 00.00\$ \$0.00 0 0	Shower Heads							
00.0\$ 00.00 0 0	ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
00.0\$ 00.00 \$0.00	9							
00.0\$ 00.00 0 0	Equipment							
00.0\$ 00.00 0 0 0	Related							
00.0\$ 00.0\$ 0 0 0								
	ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
-30								

Systems Engineering and Management Corporation, Knoxville, TN

	FY94S EEAP F1	F. KNOX W	DX W ER CONSERVATION STUDY	S NO	TUDY		F 2
	CALC	ULAT	Ö			DATE:	29 Oct 94
FACILITY NO. :	70		FUNCTION:	'	Maintenance	9	
Occupancy:	10		Operating Hours:		80		
ECO Number	Existing Fixture System Description	I PM	Retrofited Fixture System Description	m PM	Usage HRS/YR	Fixtures Quantity	Water Leaks Eliminated LPY
1	Public Lavatory	15	Spring Loaded Faucets	4.7	730	2	
Lavatory Sinks							
ECO1 TOTAL:		LPM		LPM		2	0
2	Service Sink	15	Install Aerators	9.5	730	_	0
Misc. Sinks							
ECO2 TOTAL:		LPF		LPF	#FL/YR	-	0
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	4000	2	
Water Closets			Repair Kit				
TATOL GOOD		L			מאן או		c
ECO3 IOIAL:		LPF		ראד	#FL/YK		
4	Wall Mounted Flush Valve	5.68	Install 1.0 GPF Flush Valve	3.79	18250	-	
Urinais			Kepair Kit				
ECO4 TOTAL:		LPM		LPM	HRS/YR	7	0
5							0
Shower Heads							
ECO5 TOTAL:		LPM		LPM		0	0
9							
Equipment							
Related							
ECO6 TOTAL:				-47 -47		0	0

	FΥ9	FY94S EEAP FT. KNOX W	P FT. KN	W XON	ER CONSER	ER CONSERVATION STUDY	2 OF 2
		CA	LCULAT	ION WOF	LCULATION WORK SHEET 2		
FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
2	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ECO Number	Annual Water	Annual	Energy 5	Saving	WATER	Total	Total
ECO Type	Saving LPY	ELEC	ELEC KWH	GAS	Dollar Saving	Dollar Saving	Dollars Invested
1	2			3	\$417.16	\$443.73	\$489.60
Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO1 TOTAL:	1,005,210	0	0	3	\$417.16	\$443.73	\$489.60
2	240,900			ļ	\$1.00	\$6.79	\$9.70
Misc. Sinks	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO2 TOTAL:	240,900	0	0	7	\$1.00	\$6.79	\$9.70
3	30,400				\$12.62	\$12.62	\$120.10
Water Closets	0				\$0.00	\$0.00	\$0.00
	0				\$0.00	\$0.00	\$0.00
ECO3 TOTAL:	30,400				\$12.62	\$12.62	\$120.10
4	34,493				\$14.31	\$14.31	\$63.65
Urinals	0				\$0.00	\$0.00	\$0.00
	0				\$0.00	\$0.00	\$0.00
ECO4 TOTAL:	34,493				\$14.31	\$14.31	\$63.65
5	0			0	\$0.00	\$0.00	\$0.00
Shower Heads	0			0	\$0.00	\$0.00	\$0.00
A CONTRACTOR OF THE CONTRACTOR	0			0	\$0.00	\$0.00	\$0.00
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
9	0			0	\$0.00	\$0.00	\$0.00
Equipment	0			0	\$0.00	\$0.00	\$0.00
Related	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

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	FY94S EEAP FT.		KNOX WA R CONSERVATION STUDY	S NO	TUDY		1 2
	CAL	CULAT	준			DATE:	31 Oct 94
FACILITY NO.:	72		FUNCTION:		Self Sv. Sup. Ctr.	up. Ctr.	
Occupancy:	16		Operating Hours:	•	7	,	
ECO Number	Existing Fixture System	1 1	Retrofited Fixture System	u L	Usage	Fixtures	Water Leaks
ECO Type		ILPM	Description	LPM	HRS/YR	Quantity	Eliminated LPY
-	Public Lavatory	15	Spring Loaded Faucets	4.7	130	4	
Lavatory Sinks							
FCO4 TOTAL		MO		PM		4	0
101AL.							
Misc. Sinks							
ECO2 TOTAL:		LPF		LPF	#FL/YR	0	0
3	Tank Type (public)	11.4	Install 1.6 GPF Tank Type	9	4000	9	
Water Closets			Water Closet				
					4r: 00		
ECO3 TOTAL:		LP.		777	#FL77R	٥	>
4							
Urinals							
ECO4 TOTAL:		LPM		LPM	HRS/YR	0	0
5							
Shower Heads							
		4				_[_	•
ECO5 TOTAL:		LPM	からのできない ないがく かんしゅう かんしゅう こうしん ちゅうしゅう しゅうしゅう	LPM	teriorista	٥	0
9	100000						
Equipment							
Related					-		
			The second secon				
ECO6 TOTAL:				1		5	0

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FACILITY NO.: Water Rate: 0.42 \$/KL Energy Rate: \$/KWH TO 72 Gas Rate: 10.51 \$/MWH Demand Rate: \$/KWH ECO Number Annual Water Annual Energy Saving WATER Total Total ECO Type Saving LPY KW KWH MWH Dollar Saving Dollar Saving ECO Type Saving LPY KW KWH MWH Dollar Saving Dollar Saving Lavatory Sinks 0 0 1 \$148.58 \$157.18 \$979.20 ECOT TOTAL: 358,020 0 0 \$0.00 \$0.00 \$0.00 \$0.00 Misc. Sinks Misc. Sinks \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 Water Closets T129,600 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	Water Rate: 0.42 \$/KL	Water Rate: 0.42 \$/KL Energy Rate: \$/KW Gas Rate: 10.51 \$/MWH Demand Rate: \$/KW Annual Water Annual Energy Saving asaving and Management Corpora Protal and and analysis \$/KWH \$/KWH <th></th> <th>FY9</th> <th>FY94S EEAP FT. KNOX W</th> <th>P FT. KN</th> <th>NOX W</th> <th>ER CONSER</th> <th>PER CONSERVATION STUDY SHEET 2</th> <th>2 OF 2</th>		FY9	FY94S EEAP FT. KNOX W	P FT. KN	NOX W	ER CONSER	PER CONSERVATION STUDY SHEET 2	2 OF 2
Annual Water Annual Electron Saving WATER Total	Cas Rate: 10.51 \$/MWH	Cas Rate: 10.51 \$/MWH	FACILITY NO. :	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
Saving	Saving LPY KW KWH Saving LPY KW Saving L	Saving LPY KW KWH 358,020 0 0 0 0 0 0 0 0 0	7)	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ks ELEC ELEC ELEC GAS Dollar Saving Dollar Saving Dollar Saving Dollar Saving S167.18 \$167.18 358,020 0 0 \$0.0	ks 0	ks	ECO Number	Annual Water			saving	WATER	Total	Total
ks 0 0 0 0 1 \$148.58 \$157.18	ks 358,020 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ks 0 358,020 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ECO Type	Saving		ELEC	GAS	Dollar Saving	Dollar Saving	Dollars Invested
ks 0 0 0 50.00 \$0.00 358,020 0 0 1 \$148.58 \$157.18 0 0 0 0 \$0.00 \$0.00 129,600 0 0 0 \$53.78 \$53.78 129,600 0 0 \$0.00 \$0.00 color block of the	ks 0 358,020 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ks 0 358,020 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1	12			-	\$148.58	\$157.18	\$979.20
358,020 0 1 \$148.58 \$157.18 s 0 0 \$0.00 \$0.00 s 0 0 \$0.00 \$0.00 ts 129,600 \$6.378 \$53.78 ts \$6.378 \$53.78 0 \$0.00 \$0.00 ds 0 \$0.00 t \$0.00 \$0.00	358,020 0 0 0 0 0 129,600 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	358,020 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Lavatory Sinks	Ò			0	\$0.00	\$0.00	\$0.00
5 0 \$0.00 \$0.00 c 0 0 \$0.00 45 \$0.00 \$0.00 45 \$0.00 \$0.00 45 \$0.00 \$0.00 45 \$0.00 \$0.00 45 \$0.00 \$0.00 45 \$0.00 \$0.00 45 \$0.00 \$0.00 45 \$0.00 \$0.00 45 \$0.00 \$0.00 45 \$0.00 \$0.00 46 \$0.00 \$0.00 47 \$0.00 \$0.00 48 \$0.00 \$0.00 49 \$0.00 \$0.00 40 \$0.00 \$0.00 40 \$0.00 \$0.00	0 0 0 0 0 0 ds 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 129,600 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ECO1 TOTAL:	358,020	0	0	-	\$148.58	\$157.18	\$979.20
ts	ts	ts	2	, O			0	\$0.00	\$0.00	\$0.00
ts	ts 129,600 0 0 0 0 ds 0 0 0 0 0 0 0 0 0 0 0 0 0	t 129,600 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Misc. Sinks							
ts	ts	ts	ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
ts	ts	ds 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3	129,600				\$53.78	\$53.78	\$2,514.96
129,600 \$53.78 \$53.78 \$53.78 0 \$0.00 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00	129,600 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ds 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Water Closets							
0 \$0.00 \$0.00 \$0.00 \$0.00	ds 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ds 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ECO3 TOTAL:	129.600				\$53.78	\$53.78	\$2,514.96
ds	ds 0 0 0 0 0 0 S CORP	ds 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	4	0				\$0.00	\$0.00	\$0.00
ds 0 0 0 0 \$0.00 \$0.00 \$0.00	ds 0 0 0 0 0 0 S CORP	ds 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Urinals							
ds	ds 0 0 0 0 t	ds 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ECO4 TOTAL:	0				\$0.00	\$0.00	\$0.00
lint	ads 0 0 0 0 11 11 11 11 11 11 11 11 11 11 1	int 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	5	0			0	\$0.00	\$0.00	\$0.00
L: 0 0 0 0 \$0.00 \$0.00 int	int 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	int 1 1 1S CORP	Shower Heads							
int 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Int A L: 0 0 0 0 L: 0 0 0	int 14 15 CORP	ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
00.0\$ 00.00 0 0	0	0 0	9							
00.0\$ 0 0 0 0	0 0	0 0	Equipment							
00.0\$ 0 0 0 0 0	0 0 0	0 0	Related							
00.0\$ 00.0\$ 0 0 0 0	0 0 0	0 0								
			ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

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	FY94S EEAP FT. KNOX W	KN	OX W. ER CONSERVATION STUDY	S NOI	TUDY		1
	CALC	SULAT	löl			DATE:	29 Oct 94
FACILITY NO. :	73		FUNCTION:	'	Maintenance	0	
Occupancy:	& I		Operating Hours:	·	80		
ECO Number	Existing Fixture System		Retrofited Fixture System	٤	Usage	Fixtures	Water Leaks
ECO Type	Description	LPM	Description	LPM	HRS/YR	Quantity	Eliminated LPY
1 Lavatory Sinks	Public Lavatory	ر ت	Spring Loaded Faucets	4.7	730	4	
ECO1 TOTAL:		LPM		LPM		4	0
2	Service Sink	11	Install Aerators	9.5	730	1	0
Misc. Sinks							
ECO2 TOTAL:		LPF		LPF	#FL/YR	-	0
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	3000	4	
Water Closets			Repair Kit				
ECO3 TOTAL:		LPF	このでは、 ないのでは、 できる	LPF	#FL/YR		0
4	Wall Mounted Flush Valve	5.68	Install 1.0 GPF Flush Valve	3.79	18250	2	
Urinals			Repair Kit				
ECO4 TOTAL:		LPM		LPM	HRS/YR	2	0
2							
Shower Heads							
ECO5 TOTAL:		LPM		LPM		0	0
9							
Equipment							
Kelated							
ECO6 TOTAL:						0	0

SYSTEMS CORP

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ALCULATION WORK SHEET 2 \$/KL Energy Rate: \$/KWH \$/MWH Demand Rate: \$/KWH ELEC GAS WATER Total CO \$0.00 \$0.00 CO \$0.00 \$0.00 CO \$0.00 \$0.00 CO \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	CALCULATION WORK SHEET 2 Water Rate: 0.42 \$/KL Energy Rate: \$KWA Funual Water Cas Rate: 40.51 \$/MWHER Total \$/KWA Annual Water Cas Rate: FLEC FLEC FLEC GAS ANDIAT Saving WATER Total \$/KWA			FY9	FY94S EEAF	P FT. KNOX W	MOX W	FER CONSER	FER CONSERVATION STUDY	2 OF 2	
Mater Rate: 0.42 \$/KL Energy Rate: \$/KL \$/KWNH Annual Energy Saving \$/KWNH \$/KWNH \$/KWNH \$/KWNH \$/KWNH \$/KWNH \$/KWNH \$/KWN KWH	FACILITY NO :				CA	LCULAT	OM NOI	RK SHEET 2			
Cas Rate: 10.51 \$\text{MVMH}\$ Demand Rate: \$\text{KVM}\$ \$\text{MVMTER}\$ \$\text{MVTER}\$ \$\text{Total}\$ \$\text{SMM}\$ \$\text{MVTER}\$ \$\text{Total}\$ \$\text{SMM}\$ \$\text{MVTER}\$ \$\text{Total}\$ \$\text{SMM}\$ \$\text{MVTER}\$ \$\text{Total}\$ \$\text{SMM}\$ \$\text{SMM}\$ \$\text{MVTER}\$ \$\text{Total}\$ \$\text{SMM}\$ \$\text{MVTER}\$ \$\text{Total}\$ \$\text{SMM}\$ \$\text{MVTER}\$ \$\text{Total}\$ \$\text{SMM}\$ \$\text{MVTER}\$ \$\text{MVTER}\$ \$\text{Total}\$ \$\text{SMM}\$ \$\text{MVTER}\$ \$\text{MVTER}\$ \$\text{SMM}\$ \$\text{MVTER}\$ \$\text{MVTER}	Gas Rate: 10.51 \$/MWH ECO Number Annual Water Annual Energy ELEC ELEC <th< td=""><td></td><td>FACILITY NO.:</td><td>Water Rate:</td><td>0.42</td><td>\$/KL</td><td></td><td>Energy Rate:</td><td></td><td>\$/KWH</td><td></td></th<>		FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH	
O Number Annual Water Annual Energy Saving WATER Total 10 Type Saving LPY KW KWH MWH Dollar Saving P62.09 1 1,046,820 0 0 \$0.00 \$0.00 \$0.00 1 0 46,820 0 0 \$0.00 \$0.00 2 COTAL: 1,046,820 0 0 \$0.00 2 COTAL: 1,046,820 0 0 \$0.00 2 COTAL: 65,700 0 \$0.00 \$0.00 2 Sinks 0 0 \$0.00 \$0.00 2 Sinks 0 \$0.00 \$0.00 \$0.00 3 45,600 0 \$0.00 \$0.00 \$0.00 5 Cotal \$0.00 \$0.00 \$0.00 \$0.00 TOTAL: 65,700 \$0.00 \$0.00 \$0.00 TOTAL: 68,985 \$0.00 \$0.00 \$0.00 Af,600 0 \$0.00 \$0.00 \$0.00 TOTAL: 68,985 \$0.00 <td>ECO Type Saving LPY RW Annual ELEC ELEC ELEC ELEC ELEC ELEC ELEC ELE</td> <td></td> <td>) -</td> <td>Gas Rate:</td> <td>10.51</td> <td>\$/MWH</td> <td></td> <td>Demand Rate:</td> <td></td> <td>\$/KW</td> <td></td>	ECO Type Saving LPY RW Annual ELEC ELEC ELEC ELEC ELEC ELEC ELEC ELE) -	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW	
OT Ype Saving LPY LEC ELEC LEC GAS GAS MWH Dollar Saving Bollar Saving Bollar Saving BOLD BOLD BOLD BOLD BOLD BOLD BOLD BOLD	ECO Type Saving LPY KW KWH ELEC ELEC ELEC ELEC 1 1,046,820 0 Lavatory Sinks 0 0 COT TOTAL: 1,046,820 0 2 65,700 0 0 Misc. Sinks 0 0 ECO2 TOTAL: 65,700 0 Water Closets 0 0 ECO2 TOTAL: 65,700 0 Urinals 0 0 ECO3 TOTAL: 68,985 0 ECO4 TOTAL: 68,985 0 Shower Heads 0 0 ECO5 TOTAL: 0 0 ECO5 TOTAL: 0 0 ECO5 TOTAL: 0 0 Equipment 0 0 Equipment 0 0 ECO6 TOTAL: 0 0 CO6 0 0 ECO6 TOTAL: 0 0 0 0 0 0 0 0 0 0 0		ECO Number	Annual Water	I I		Saving	WATER	Total	Total	1
tory Sinks 1,046,820 3 \$434.43 \$462.09 tory Sinks 0 \$0.00 \$0.00 \$0.00 TOTAL: 1,046,820 0 3 \$434.43 \$462.09 TOTAL: 1,046,820 0 0 \$0.00 \$0.00 sc. Sinks 0 0 \$0.00 \$0.00 \$0.00 TOTAL: 65,700 0 0 \$0.00 \$0.00 TOTAL: 65,700 0 \$0.00 \$0.00 \$0.00 TOTAL: 65,700 0 \$0.00 \$0.00 TOTAL: 65,700 0 \$0.00 \$0.00 TOTAL: 45,600 \$0.00 \$0.00 \$0.00 A 5,600 0 \$0.00 \$0.00 \$0.00 TOTAL: 68,985 \$0.00 \$0.00 \$0.00 TOTAL: 68,985 \$0.00 \$0.00 \$0.00 50.00 0 \$0.00 \$0.00 \$0.00 6 0 \$0	1 1,046,820 Lavatory Sinks 0 CO1 TOTAL: 1,046,820 0 ECO1 TOTAL: 65,700 0 Misc. Sinks 0 0 ECO2 TOTAL: 65,700 0 0 ECO2 TOTAL: 65,700 0 0 ECO3 TOTAL: 4,600 0 0 ECO3 TOTAL: 68,985 0 0 ECO4 TOTAL: 0 0 0 ECO5 TOTAL: 0 0 0 ECO5 TOTAL: 0 0 0 Equipment 0 0 0 Related 0 0 0 ECO6 TOTAL: 0 0 0 ECO6 TOTAL: 0 0 0 ECO6 TOTAL: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 </td <td></td> <td>ECO Type</td> <td></td> <td></td> <td>ELEC</td> <td>GAS</td> <td>Dollar Saving</td> <td>Dollar Saving</td> <td>Dollars Invested</td> <td></td>		ECO Type			ELEC	GAS	Dollar Saving	Dollar Saving	Dollars Invested	
tory Sinks 0 \$0.00 \$0.00 TOTAL: 1,046,820 0 \$0.00 \$0.00 zo. Sinks 0 0 \$0.00 \$0.00 sc. Sinks 0 0 \$0.00 \$0.00 TOTAL: 65,700 0 \$0.00 \$0.00 TOTAL: 65,700 0 \$0.00 \$0.00 TOTAL: 65,700 0 \$0.00 \$0.00 TOTAL: 45,600 \$0.00 \$0.00 \$0.00 TOTAL: 45,600 \$0.00 \$0.00 \$0.00 TOTAL: 45,600 \$0.00 \$0.00 \$0.00 TOTAL: 68,985 \$0.00 \$0.00 \$0.00 Accidence 0	Lavatory Sinks 0 ECO1 TOTAL: 1,046,820 0 2 65,700 0 Misc. Sinks 0 0 ECO2 TOTAL: 65,700 0 0 ECO2 TOTAL: 65,700 0 0 ECO3 TOTAL: 4 68,985 0 ECO4 TOTAL: 68,985 0 0 ECO4 TOTAL: 0 0 0 ECO5 TOTAL: 0 0 0 ECO6 TOTAL: 0 0 0 ECO6 TOTAL: 0 0 0 ECO6 TOTAL: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 </td <td></td> <td>1</td> <td>1,046,820</td> <td></td> <td></td> <td>3</td> <td>\$434.43</td> <td>\$462.09</td> <td>\$979.20</td> <td>T</td>		1	1,046,820			3	\$434.43	\$462.09	\$979.20	T
TOTAL: 1,046,820 0 \$0.00 \$0.00 2 65,700 0 \$0.27 \$1.85 sc. Sinks 0 0 \$0.27 \$1.85 sc. Sinks 0 0 \$0.27 \$1.85 sc. Sinks 0 0 \$0.00 \$0.00 TOTAL: 65,700 0 \$0.00 \$0.00 TOTAL: 65,600 0 0 \$0.00 r Closets 0 \$0.00 \$0.00 \$0.00 TOTAL: 4,600 \$0.00 \$0.00 \$0.00 TOTAL: 68,985 \$0.00 \$0.00 \$0.00 Nordal: 0 \$0.00 \$0.00 \$0.00 Ner Heads 0 \$0.00 \$0.00 \$0.00 TOTAL: 68,985 \$0.00 \$0.00 \$0.00 Fo 0 \$0.00 \$0.00 \$0.00 Nordalizated 0 \$0.00 \$0.00 Related 0 \$0.00	COT TOTAL: 1,046,820 0 0 C		Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00	-
TOTAL: 1,046,820 0 3 \$434,43 \$462.09 2 65,700 0 \$0.07 \$1.85 sc. Sinks 0 0 \$0.00 \$0.00 TOTAL: 65,700 0 \$0.00 \$0.00 TOTAL: 65,700 0 \$0.00 \$0.00 TOTAL: 65,700 0 \$0.00 \$0.00 strips 0 \$0.00 \$0.00 \$0.00 strips 0 \$0.00 \$0.00 \$0.00 TOTAL: 68,985 \$0.00 \$0.00 \$0.00 TOTAL: 68,985 \$0.00 \$0.00 \$0.00 Wer Heads 0 \$0.00 \$0.00 \$0.00 TOTAL: 68,985 0 \$0.00 \$0.00 TOTAL: 0 0 \$0.00 \$0.00 Fo 0 \$0.00 \$0.00 \$0.00 Fo 0 \$0.00 \$0.00 \$0.00 Fo 0	ECO1 TOTAL: 1,046,820 0 0 2 65,700 0 Misc. Sinks 0 0 0 ECO2 TOTAL: 65,700 0 0 ECO2 TOTAL: 45,600 0 0 ECO3 TOTAL: 68,985 0 0 ECO4 TOTAL: 68,985 0 0 ECO5 TOTAL: 0 0 0 ECO5 TOTAL: 0 0 0 Equipment 0 0 0 Related 0 0 0 ECO5 TOTAL: 0 0 0 ECO6 TOTAL: 0 0 0			0			0	\$0.00	\$0.00	\$0.00	
2 65,700 700 \$0.27 \$1.85 sc. Sinks 0 \$0.00 \$0.00 \$0.00 TOTAL: 65,700 0 \$0.00 \$0.00 TOTAL: 45,600 0 \$0.00 \$0.00 TOTAL: 68,985 0 \$0.00 \$0.00 Acriticals 0 \$0.00 \$0.00 \$0.00 \$0.00 Acr	2 65,700 Misc. Sinks 0 CCO2 TOTAL: 65,700 0 3 45,600 0 Water Closets 0 0 ECO3 TOTAL: 45,600 0 CCO3 TOTAL: 68,985 0 ECO4 TOTAL: 68,985 0 ECO5 TOTAL: 0 0 ECO6 TOTAL: 0 0		ECO1 TOTAL:	1,046,820	0	0	3	\$434.43	\$462.09	\$979.20	
sc. Sinks 0 \$0.00 \$0.00 TOTAL: 65,700 0 \$0.00 \$0.00 TOTAL: 45,600 0 0 \$0.00 \$0.00 TOTAL: 45,600 0 \$0.00 \$0.00 \$0.00 TOTAL: 45,600 \$0.00 \$0.00 \$0.00 TOTAL: 45,600 \$0.00 \$0.00 \$0.00 TOTAL: 46,895 80.00 \$0.00 \$0.00 TOTAL: 68,985 80.00 \$0.00 \$0.00 Acriticals 0 \$0.00 \$0.00 \$0.00 Acriticals 0 0 \$0.00 \$0.00 Acriticals 0 0 \$0.00 \$0.00	Misc. Sinks 0 0 0 ECO2 TOTAL: 65,700 0 3 45,600 0 Water Closets 0 0 ECO3 TOTAL: 45,600 0 ECO3 TOTAL: 68,985 0 ECO4 TOTAL: 0 0 ECO5 TOTAL: 0 0 Equipment 0 0 Equipment 0 0 Related 0 0 ECO6 TOTAL: 0 0		2	65,700			0	\$0.27	\$1.85	\$9.70	
TOTAL: 66,700 \$0.00 \$0.00 \$0.00 3 45,600 0 0 \$0.00 \$1.85 ar Closets 0 \$0.27 \$1.85 \$1.85 ar Closets 0 \$0.00 \$0.00 \$0.00 TOTAL: 45,600 \$0.00 \$0.00 \$0.00 TOTAL: 68,985 \$0.00 \$0.00 \$0.00 TOTAL: 68,985 \$0.00 \$0.00 \$0.00 Fo 0 \$0.00 \$0.00 \$0.00 Ner Heads 0 \$0.00 \$0.00 \$0.00 Action 0 \$0.00 \$0.00 \$0.00 Related 0 \$0.00 \$0.00 \$0.00 Rel	CCO2 TOTAL:		Misc. Sinks	0			0	\$0.00	\$0.00	\$0.00	
TOTAL: 65,700 0 0 \$0.27 \$1.85 3 45,600 0 \$18.92 \$18.92 ar Closets 0 \$0.00 \$0.00 \$0.00 TOTAL: 45,600 \$0.00 \$0.00 \$0.00 TOTAL: 68,985 \$28.63 \$28.63 \$28.63 Jrinals 0 \$0.00 \$0.00 \$0.00 TOTAL: 68,985 \$0.00 \$0.00 \$0.00 ver Heads 0 0 \$0.00 \$0.00 ver Heads 0 0 \$0.00 \$0.00 e 0 0 \$0.00 \$0.00 e 0 \$0.00 \$0.00 \$0.00 telated	ECO2 TOTAL: 65,700 0 0 3 45,600 0 0 Water Closets 0 0 0 ECO3 TOTAL: 4 68,985 0 0 ECO4 TOTAL: 68,985 0 0 0 ECO5 TOTAL: 0 0 0 0 ECO5 TOTAL: 0 0 0 0 Equipment 0 0 0 0 ECO5 TOTAL: 0 0 0 ECO6 TOTAL: 0 0 0			0			0	\$0.00	\$0.00	\$0.00	
45,600 \$18.92 \$18.92 \$18.92 efs 0 \$0.00 \$0.00 \$0.00 45,600 \$0.00 \$0.00 \$0.00 \$0.00 45,600 \$0.00 \$0.00 \$0.00 \$0.00 68,985 \$0.00 \$0.00 \$0.00 \$0.00 68,985 \$0.00 \$0.00 \$0.00 \$0.00 45,600 \$0.00 \$0.00 \$0.00 \$0.00 68,985 \$0.00 \$0.00 \$0.00 \$0.00 68,985 \$0.00 \$0.00 \$0.00 \$0.00 4cs \$0.00 \$0.00 \$0.00 \$0.00 50.00 \$0.00 \$0.00 \$0.00 \$0.00 60 \$0.00 \$0.00 \$0.00 \$0.00 60 \$0.00 \$0.00 \$0.00 \$0.00 60 \$0.00 \$0.00 \$0.00 \$0.00 60 \$0.00 \$0.00 \$0.00 \$0.00 60 \$0.00 \$0	3 45,600 Water Closets 0 0 ECO3 TOTAL: 45,600 4 68,985 Urinals 0 ECO4 TOTAL: 68,985 Shower Heads 0 ECO5 TOTAL: 0 0 0 ECO5 TOTAL: 0 0		ECO2 TOTAL:	65,700	0	0	0	\$0.27	\$1.85	\$9.70	
efs 0 \$0.00 \$0.00 1 45,600 \$0.00 \$0.00 2 45,600 \$0.00 \$0.00 3 45,600 \$0.00 \$0.00 45,600 \$0.00 \$0.00 \$0.00 68,985 \$0.00 \$0.00 \$0.00 45,600 \$0.00 \$0.00 \$0.00 50 \$0.00 \$0.00 \$0.00 45,600 \$0.00 \$0.00 \$0.00 46 0 \$0.00 \$0.00 46 \$0.00 \$0.00 \$0.00 46 \$0.00 \$0.00 \$0.00 46 \$0.00 \$0.00 \$0.00 47 \$0.00 \$0.00 \$0.00 48 \$0.00 \$0.00 \$0.00 49 \$0.00 \$0.00 \$0.00 40 \$0.00 \$0.00 \$0.00 40 \$0.00 \$0.00 \$0.00 40 \$0.00 \$0.00 \$0.0	Water Closets 0 ECO3 TOTAL: 45,600 4 68,985 Urinals 0 ECO4 TOTAL: 68,985 5 0 Shower Heads 0 6 0 ECO5 TOTAL: 0 6 0 ECO5 TOTAL: 0 6 0 ECO5 TOTAL: 0 0 0 ECO6 TOTAL: 0 0 0 ECO6 TOTAL: 0 0 0 ECO6 TOTAL: 0		3	45,600				\$18.92	\$18.92	\$240.19	
1 45,600 \$0.00 \$0.00 45,600 \$18.92 \$18.92 68,985 \$28.63 \$28.63 0 \$0.00 \$0.00 1 68,985 \$28.63 \$28.63 1 68,985 \$0.00 \$0.00 2 \$0.00 \$0.00 \$0.00 3ds 0 0 \$0.00 3ds 0 \$0.00 \$0.00 1 0 \$0.00 \$0.00 1 0 \$0.00 \$0.00 1 0 \$0.00 \$0.00 1 0 \$0.00 \$0.00 1 0 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00	CO3 TOTAL:		Water Closets	0				\$0.00	\$0.00	\$0.00	
: 45,600 \$18.92 \$18.92 \$18.92 68,985 \$0.00 \$0.00 \$0.00 \$0.00 : 68,985 \$0.00 \$0.00 \$0.00 : 68,985 \$0.00 \$0.00 \$0.00 : 68,985 \$0.00 \$0.00 \$0.00 : 0 \$0.00 \$0.00 \$0.00 ids 0 \$0.00 \$0.00 \$0.00 it 0 \$0.00 \$0.00 \$0.00 <td< td=""><td>ECO3 TOTAL: 45,600 4 68,985 0 Urinals 0 0 ECO4 TOTAL: 68,985 0 ECO5 TOTAL: 0 0 ECO5 TOTAL: 0 0 Equipment 0 0 Related 0 0 ECO6 TOTAL: 0 0</td><td></td><td></td><td>0</td><td></td><td></td><td></td><td>\$0.00</td><td>\$0.00</td><td>\$0.00</td><td></td></td<>	ECO3 TOTAL: 45,600 4 68,985 0 Urinals 0 0 ECO4 TOTAL: 68,985 0 ECO5 TOTAL: 0 0 ECO5 TOTAL: 0 0 Equipment 0 0 Related 0 0 ECO6 TOTAL: 0 0			0				\$0.00	\$0.00	\$0.00	
68,985 \$28.63 \$28.63 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00	4 68,985 6 Urinals 0 0 ECO4 TOTAL: 68,985 0 Shower Heads 0 0 CO5 TOTAL: 0 0 Equipment 0 0 Related 0 0 ECO6 TOTAL: 0 0 ECO6 TOTAL: 0 0 ECO6 TOTAL: 0 0 ECO6 TOTAL: 0 0 SYSTEMS CORP		ECO3 TOTAL:	45,600				\$18.92	\$18.92	\$240.19	
0 \$0.00 \$0.00 0 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 d 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00	Urinals 0 CCO4 TOTAL: 68,985 5 0 Shower Heads 0 CCO5 TOTAL: 0 0 Equipment 0 0 Related 0 0 ECO6 TOTAL: 0 0 ECO6 TOTAL: 0 0 SYSTEMS CORP		4	68,985				\$28.63	\$28.63	\$127.30	
68,985 \$0.00 \$0.00 ds 68,985 \$28.63 \$28.63 ds 0 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 d 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00	0 0 0 0 0 0 0 0 0 0		Urinals	0				\$0.00	\$0.00	\$0.00	
68,985 \$28.63 \$28.63 \$28.63 0 0 \$0.00 \$0.00 0 0 \$0.00 \$0.00 0 0 \$0.00 \$0.00 0 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 0 0 \$0.00 \$0.00 0 0 \$0.00 \$0.00 0 0 \$0.00 \$0.00 0 0 \$0.00 \$0.00	ECO4 TOTAL: 68,985 5 0 Shower Heads 0 CCO5 TOTAL: 0 0 Equipment 0 0 Related 0 0 ECO6 TOTAL: 0 0 SYSTEMS CORP			0				\$0.00	\$0.00	\$0.00	
ds 0 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 0 0 \$0.00 \$0.00 0 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00	5 0 Shower Heads 0 0 CCO5 TOTAL: 0 0 0 Equipment 0 0 0 Related 0 0 0 ECO6 TOTAL: 0 0 0 SYSTEMS CORP 0 0		ECO4 TOTAL:	68,985				\$28.63	\$28.63	\$127.30	
ds 0 \$0.00 \$0.00 0 0 \$0.00 \$0.00 0 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00	Shower Heads 0 CCO5 TOTAL: 0 0 Equipment 0 0 Related 0 0 ECO6 TOTAL: 0 0 SYSTEMS CORP		5	0			0	\$0.00	\$0.00	\$0.00	
0 \$0.00 \$0.00 \$0.00 0 0 0 \$0.00 \$0.00 t 0 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 \$0.00	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		Shower Heads	0			0	\$0.00	\$0.00	\$0.00	
0 0 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 \$0.00 t 0 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 \$0.00	ECO5 TOTAL: 0 0 0 6 0 0 0 Related 0 0 0 ECO6 TOTAL: 0 0 0 SYSTEMS CORP			0			0	\$0.00	\$0.00	\$0.00	
t 0 \$0.00 \$0.00	Equipment		ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00	
t 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00	Equipment 0 Related 0 0 0 ECO6 TOTAL: 0 0 SYSTEMS CORP		9	0			0	\$0.00	\$0.00	\$0.00	
00.0\$ 00.0\$ 00.0\$ 0 00.0\$ 0 00.00\$ 0	Related 0 0 0 ECO6 TOTAL: 0 0 SYSTEMS CORP 0 0		Equipment	0			0	\$0.00	\$0.00	\$0.00	
00.0\$ 00.0\$ 0 0 0 00.0\$ 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0		Related	0			0	\$0.00	\$0.00	\$0.00	
00.0\$ 0.00\$ 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ECOG TOTAL: 0 0 0 0 SYSTEMS CORP			0			0	\$0.00	\$0.00	\$0.00	
00.0\$ 0.0\$ 0 0 0	SYSTEMS CORP			0			0	\$0.00	\$0.00	\$0.00	
	SYSTEMS CORP		ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00	
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Systems Engineering and Management Corporation, Knoxville, TN

	FY94S EEAP FT	. KNOX WA	X WA R CONSERVATION STUDY	S NOI	TUDY		1()2
	CALC	ULATI	호			DATE:	31 Oct 94
FACILITY NO. :	62		FUNCTION:	01	Class VI		
Occupancy:	15		Operating Hours:	ı	10		
ECO Number	Existing Fixture System	DIVI	Retrofited Fixture System	m M	Usage HRS/YR	Fixtures Quantity	Water Leaks Eliminated LPY
ECO Type	Public Lavatory	9.5	Spring Loaded Faucets	4.7	130	2	
Lavatory Sinks							
ECO1 TOTAL:		LPM		LPM		2	О
2							
Misc. Sinks							
FCO2 TOTAL:		LPF		LPF	#FL/YR	0	0
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	11000	2	
Water Closets			Repair Kit				
ECO3 TOTAL .		I DF		LPF	#FL/YR	2	0
4		i					
Urinals							
ECOA TOTAL		L PM		LPM	HRS/YR	0	0
5							
Shower Heads							
. 14101	第16年 教授の一、一会、一会、一会、一会、	Md		EPM	を で で いき	0	0
9							
Equipment							
Related							
ECO6 TOTAL:			大学 (1) 1 (1.05 (0	0
P. CVCTEME	990	9	Chaincering and Manage	nomt C	ornoratio	1	Knoxville TN
A COLUMN CORP.	ר אט. ד	Syster	Systems Engineering and Management Corporation,		Ol polatio		
6-					÷		
<i>37</i>							

FACILITY NO.: Water Rate: 0.42 \$/K/L Energy Rate: \$/K/WH 79 Gas Rate: 10.51 \$/MWH Demand Rate: \$/K/WH ECO Number Annual Water Annual Energy Saving WATER Total \$/K/WH ECO Type Saving LPY KW KWH MWH Dollar Saving ECOT TOTAL: 0 \$0.00 <td< th=""><th> Mater Rate: 0.42 \$/KL Energy Rate: 5/KN </th><th></th><th>FY9</th><th>FY94S EEAP</th><th>P FT. KN</th><th>FT. KNOX W</th><th>ER CONSER</th><th>ER CONSERVATION STUDY</th><th>2 OF 2</th></td<>	Mater Rate: 0.42 \$/KL Energy Rate: 5/KN		FY9	FY94S EEAP	P FT. KN	FT. KNOX W	ER CONSER	ER CONSERVATION STUDY	2 OF 2
Mater Rate:	Mater Rate: 0.42 %KL			5	LCOLAI	ON NO	KN SHEE I 2		
Annual Water	Cas Rate: 10.51 \$/MWH	FACILITY NO.:	Water Rate:	0.42	\$∕KL		Energy Rate:		\$/KWH
Saving LPY KW KWH MWH Dollar Saving Saving LPY KW KWH MWH Dollar Saving Dollar Saving Saving LPY KWH MWH Dollar Saving	Saving LPY KW KWH Saving LPY KW KWH 93,210 0 0 0 0 0 0 0 0 0	2	Gas Rate:	ı	\$/MWH		Demand Rate:		\$/KW
ks ELEC ELEC GAS Dollar Saving Dollar Saving Dollar Saving Dollar Saving Dollar Saving Pollar Saving <td>ks 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0</td> <td>ECO Number</td> <td>Annual Water</td> <td></td> <td></td> <td>saving</td> <td>WATER</td> <td>Total</td> <td>Total</td>	ks 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ECO Number	Annual Water			saving	WATER	Total	Total
ks 0 \$33.210 0 \$38.68 \$40.92 93,210 0 0 \$0.00 \$0.00 \$0.00 5 0 0 0 \$38.68 \$40.92 5 0 0 0 \$5.38.68 \$40.92 5 0 0 0 \$5.00 \$0.00 \$0.00 83,600 \$0.00 \$5.4.69 \$34.69 14s 83,600 \$0 0 \$5.00 \$0.00 6 0 0 0 \$0.00 \$0.00 \$0.00 14	ks 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ECO Type			ELEC	GAS	Dollar Saving	Dollar Saving	Dollars Invested
ks 0 0 0 \$0.00 \$0.00 s 33.210 0 0 0 \$38.68 \$40.92 s 0 0 0 0 \$0.00 \$0.00 s 33.600 \$0.00 \$0.00 ks 83.600 \$0 0 \$334.69 c 0 0 0 \$0 \$0.00 c \$0.00 \$0.00 c	ks 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1	12			0	\$38.68	\$40.92	\$489.60
83,600 0 0 \$38.68 \$40.92 8.00 \$0 0 \$0.00 \$	93,210 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Lavatory Sinks				0	\$0.00	\$0.00	\$0.00
83,600	15. CORP	ECO4 TOTAL	03 240	c	c	c	\$38 68	\$40.92	8489 60
## ## ## ## ## ## ## ## ## ## ## ## ##	15 83,600 83,600 0 0 0 0 0 0 0 0 0 0 0 0	2	0		,		\$0.00	\$0.00	\$0.00
ts 83,600 0 0 \$0.00 \$0.00 to 0 \$0.00 to 0 \$0.00	ds 83,600 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Misc. Sinks					-		
45 83,600 \$34.69 \$34.69 83,600 \$34.69 \$34.69 83,600 \$0.00 \$0.00 0 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 t \$0.00 \$0.00 \$0.00 t \$0.00 \$0.00 \$0.00	83,600 83,600 0 0 0 0 0 0 0 0 0 0 0 0	ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
### ### ### ### ### ### ### ### ### ##	ds 83,600 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3	83,600				\$34.69	\$34.69	\$120.10
83,600 \$34.69 \$34.69 0 \$0.00 \$0.00 0 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 t t \$0.00 \$0.00	83,600 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Water Closets							
0 \$0.00 0 \$0.00 0 0 0 \$0.00 t	ds 0 0 0 0 0 0 S CORP	ECO3 TOTAL:	83,600				\$34.69	\$34.69	\$120.10
ds	ds 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	4	0				\$0.00	\$0.00	\$0.00
ds 0 0 \$0.00 t 0 0 0 \$0.00	ds 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Urinals							
ds 0 0 \$0.00 40.00	ds 0 0 0 0 tr	ECO4 TOTAL:	0				\$0.00	\$0.00	\$0.00
0 0 0 0 \$0.00 t	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	5 Shower Heads				0	\$0.00	\$0.00	\$0.00
t \$0.00	t 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0					ļ			000
Equipment Related	0 0 0	ECOS IOTAL:	0	9	0		\$0.00	\$0.00	00.04
Related	0 0	Equipment							
	0 0	Related							
	0								
00.0\$ 0 0 0 0		ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

	FY94S FFAP FT KNOX W	T K N	DX W ER CONSERVATION STUDY	S NO	ruby		1 2
	CALC	CULAT	CALCULATION WORK SHEET 1			DATE:	29 Oct 94
FACILITY NO.:	80		FUNCTION:	_,	Maintenance	e	
Occupancy:	© I		Operating Hours:	'	80		
ECO Number	Existing Fixture System		Retrofited Fixture System	٤	Usage	Fixtures	Water Leaks
ECO Type	Description	LPM	Description	LPM	HRS/YR	Quantity	Eliminated LPY
•							
Lavatory Sinks							
FCO1 TOTAL:		LPM		LPM		0	0
2							
Misc. Sinks							
		L		L C	מא ושה		
ECO2 TOTAL:		LPF		777	#FLYK	0	0
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	3000	2	
Water Closets			Repair Kit				
		1		1			
ECO3 TOTAL:		7		7		7	
4	Wall Mounted Flush Valve	5.68	Install 1.0 GPF Flush Valve	3.79	18250	က	
Urinals			Repair Kit				
FCO4 TOTAL		LPM	全是一个是一个人的,他们就是一个	LPM	LPM HRS/YR	က	0
5							
Shower Heads							
							¢
ECO5 TOTAL:		LPM		LPM		٥	0
9							
Equipment							
Related							
ECO6 TOTAL:						0	0

Systems Engineering and Management Corporation, Knoxville, TN

FACILITY NO.: Water Rate: 0.42 \$/KL Facility Rate: \$/KWH Facility Rate: \$/KWH Facility Rate: \$/KWH \$/KWH Facility Rate: \$/KWH \$/KWH Facility Rate: \$/KWH \$/KWH WATER Total Factor \$/KWH WATER MATER Total Dollar Saving \$/KWH \$/KWH MATER Total Dollar Saving Dollar Saving \$/KWH \$/KWH <th> SACHILITY NO.: Water Rate: 0.42 \$/K/L SACHILITY NO.: Water Rate: 0.51 \$/K/W SACHILITY NO.: Water Rate: 0.51 \$/K/W SACHILITY NO.: Water Rate: 0.51 S/K/W SACHILITY NO.: SACHILITY NO.: </th> <th>Water Rate: 0.42 \$/KL Energy Rate: \$/KVH Final Energy Saving Final Water \$/KWH Demand Rate: \$/KWH \$/KWH Demand Rate: \$/KWH \$/KWH Demand Rate: \$/KWH \$/KWH \$/KWH Demand Rate: \$/KWH \$/K</th> <th></th> <th></th> <th>CAL</th> <th>LCULATION WO</th> <th>ION WO</th> <th>CALCULATION WORK SHEET 2</th> <th></th> <th></th>	SACHILITY NO.: Water Rate: 0.42 \$/K/L SACHILITY NO.: Water Rate: 0.51 \$/K/W SACHILITY NO.: Water Rate: 0.51 \$/K/W SACHILITY NO.: Water Rate: 0.51 S/K/W SACHILITY NO.:	Water Rate: 0.42 \$/KL Energy Rate: \$/KVH Final Energy Saving Final Water \$/KWH Demand Rate: \$/KWH \$/KWH Demand Rate: \$/KWH \$/KWH Demand Rate: \$/KWH \$/KWH \$/KWH Demand Rate: \$/KWH \$/K			CAL	LCULATION WO	ION WO	CALCULATION WORK SHEET 2		
Column C	CON Number Annual Water Annual Energy Acade Saving LPY Annual Mater Annual Energy Energy Energy Annual Mater Annual Energy Energy Annual Mater Annual Mater <td>ECO Number Annual Water Annual Energy Annual Energy Saving ELEC ELEC WATER Total Total Total Total ECO Type Saving LPY KW KWH MWH Dollar Saving Dollar Saving S0.00 \$0.00<td>FACILITY NO.:</td><td>Water Rate:</td><td>0.42</td><td>\$/KL</td><td></td><td>Energy Rate:</td><td></td><td>\$/KWH</td></td>	ECO Number Annual Water Annual Energy Annual Energy Saving ELEC ELEC WATER Total Total Total Total ECO Type Saving LPY KW KWH MWH Dollar Saving Dollar Saving S0.00 \$0.00 <td>FACILITY NO.:</td> <td>Water Rate:</td> <td>0.42</td> <td>\$/KL</td> <td></td> <td>Energy Rate:</td> <td></td> <td>\$/KWH</td>	FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
Saving LPY KW KWH MWH Dollar Saving Saving LPY KW KWH MWH Dollar Saving Saving LPY KW KWH MWH Dollar Saving S0.00 \$0.0	ECO Number Annual Water Annual Energy Saving WATER Total Total Total ECO Type Saving LPC GAS S0.00 \$0.00 \$0.00 \$0.00 Lavatory Sinks 0 0 0 \$0.00 \$0.00 \$0.00 \$0.00 ECOT TOTAL: 0 0 0 \$0.00 \$0.00 \$0.00 \$0.00 Misc. Sinks 0 0 0 \$0.00 \$0.00 \$0.00 \$0.00 Misc. Sinks 0 0 0 \$0.00	ECO Number Annual Water Annual Energy Saving WATER Total Total Total ECO Type Saving LPY KWH MWH Dollar Saving Dollar Saving Dollar Saving Dollars Invested Lavatory Sinks 0 0 0 \$0.00 \$0.00 \$0.00 ECOT TOTAL: 0 0 0 \$0.00 \$0.00 \$0.00 Misc. Sinks 0 0 \$0.00 \$0.00 \$0.00 \$0.00 Water Closets 0 0 \$0.00 \$0.00 \$0.00 \$0.00 ECOZ TOTAL: 22.800 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 ECOZ TOTAL: 0 0 \$0.00 \$0.00 \$0.00 \$0.00	00	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
saving LPC ELEC GAS Dollar Saving Dollar Saving nks 0 50.00 \$0.00 \$0.00 i.e. 0 0 \$0.00 \$0.00 i.e. 0 \$0.00 \$0.00 <td>ECO Type Saving LPY KW KWH MWH MWH MWH Dollar Saving Dollar Saving L MWH MWH MWH Dollar Saving L MWH MWH MWH DOLLAR S0.000 Dollar Saving L MWH MWH MWH DOLLAR S0.000 S0.000 \$0.000</td> <td>ECO Type Saving LPY KW KWH MWH Dollar Saving So.00 Dollar Saving So.00 Dollar Saving So.00 So.00</td> <td>ECO Number</td> <td>Annual Water</td> <td></td> <td></td> <td>Saving</td> <td>WATER</td> <td>Total</td> <td>Total</td>	ECO Type Saving LPY KW KWH MWH MWH MWH Dollar Saving Dollar Saving L MWH MWH MWH Dollar Saving L MWH MWH MWH DOLLAR S0.000 Dollar Saving L MWH MWH MWH DOLLAR S0.000 S0.000 \$0.000	ECO Type Saving LPY KW KWH MWH Dollar Saving So.00 Dollar Saving So.00 Dollar Saving So.00	ECO Number	Annual Water			Saving	WATER	Total	Total
New Part	1 color of the color	1 0 0 \$0.00 \$0.00 \$0.00 ECOT TOTAL: 0 0 \$0.00 \$0.00 \$0.00 ECOT TOTAL: 0 0 \$0.00 \$0.00 \$0.00 Misc. Sinks 0 0 0 \$0.00 \$0.00 Misc. Sinks 0 0 0 \$0.00 \$0.00 ECOZ TOTAL: 0 0 0 \$0.00 \$0.00 Water Closets 0 0 0 \$0.00 \$0.00 \$0.00 ECOZ TOTAL: 0 0 0 \$0.00 \$0	ECO Type				GAS	Dollar Saving	Dollar Saving	Dollars Invested
New O	Lavatory Sinks 0 \$0.00	ECOT TOTAL: 0 \$0.00 <	1				0	\$0.00	\$0.00	\$0.00
0	ECO1 TOTAL: 0 \$0.00	ECOT TOTAL: 0 0 \$0.00 \$	Lavatory Sinks				0	\$0.00	\$0.00	\$0.00
10	ECO1 TOTAL: 0 0 50.00 \$	ECO1 TOTAL: 0 0 50.00 \$0.00 \$0.00 Misc. Sinks 0 0 \$0.00 \$0.00 \$0.00 Misc. Sinks 0 0 \$0.00 \$0.00 \$0.00 ECO2 TOTAL: 0 0 0 \$0.00 \$0.00 \$0.00 ECO2 TOTAL: 0 0 \$0.00 \$0.00 \$0.00 \$0.00 Water Closets 0 0 \$0.00 \$0.00 \$0.00 \$0.00 Water Closets 0 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 Water Closets 0 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 ECO3 TOTAL: 22,800 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 ECO4 TOTAL: 0 0 \$0.00 \$0.00 \$0.00 \$0.00 Shows Flated 0 0 \$0.00 \$0.00 \$0.00 \$0.00 ECO5 TOTAL: 0 0 \$0.00 \$0.00 \$					0	\$0.00	\$0.00	\$0.00
2 0 \$0.00 \$0.00 c. Sinks 0 \$0.00 \$0.00 c. Sinks 0 0 \$0.00 \$0.00 CoTAL: 0 0 0 \$0.00 \$0.00 Sinks 0 0 \$0.00 \$0.00 \$0.00 \$0.00 Sinclests 0 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 Frinals 0 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 TOTAL: 22,800 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 Formal 0 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 Formal 0 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 VALSH: 0 0 \$0.00 \$0.00 \$0.00 \$0.00 VALSH: 0 0 \$0.00 \$0.00 \$0.00 \$0.00 VALSH: 0 0 \$0.00 \$0.00 \$0.00	2 0 \$0.00<	2 0 \$0.00 </td <td>ECO1 TOTAL:</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>\$0.00</td> <td>\$0.00</td> <td>\$0.00</td>	ECO1 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
c. Sinks 0 \$0.00 \$0.00 CotAL: 0 0 \$0.00 \$0.00 TOTAL: 0 0 \$0.00 \$0.00 3 22,800 \$0.00 \$0.00 \$0.00 Fr Closets 0 \$0.00 \$0.00 \$0.00 For Closets 0 \$0.00 \$0.00 \$0.00 FOTAL: 22,800 \$0.00 \$0.00 \$0.00 FOTAL: 22,800 \$0.00 \$0.00 \$0.00 Irinals 0 \$0.00 \$0.00 \$0.00 FOTAL: 0 \$0.00 \$0.00 \$0.00 FOTAL: 0 \$0.00 \$0.00 \$0.00 Very Heads 0 \$0.00 \$0.00 \$0.00 VOTAL: 0 \$0.00 \$0.00 \$0.00 FOTAL: 0 \$0.00 \$0.00 \$0.00 Injunent 0 \$0.00 \$0.00 \$0.00 Injunent 0 \$0.00	Misc. Sinks 0 \$0.00 \$0.00 \$0.00 ECOZ TOTAL: 0 0 \$0.00 \$0.00 \$0.00 ECOZ TOTAL: 0 0 \$0.00 \$0.00 \$0.00 \$0.00 Water Closets 0 0 \$0.00 \$0.00 \$0.00 \$0.00 ECO3 TOTAL: 22.800 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 ECO3 TOTAL: 22.800 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 ECO3 TOTAL: 0 0 \$0.00 \$0.00 \$0.00 \$0.00 ECO4 TOTAL: 0 0 \$0.00 \$0.00 \$0.00 \$0.00 ECO4 TOTAL: 0 0 \$0.00 \$0.00 \$0.00 \$0.00 Shower Heads 0 0 \$0.00 \$0.00 \$0.00 \$0.00 ECO5 TOTAL: 0 0 \$0.00 \$0.00 \$0.00 \$0.00 Eclos TOTAL: 0 0 \$0.00 \$0.00	Misc. Sinks 0 \$0.00 \$0.00 \$0.00 ECOZ TOTAL: 0 0 \$0.00 \$0.00 \$0.00 ECOZ TOTAL: 0 0 0 \$0.00 \$0.00 \$0.00 A vater Closets 0 0 0 \$0.00 \$0.00 \$0.00 \$0.00 ECO3 TOTAL: 22,800 0 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 ECO3 TOTAL: 22,800 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 ECO3 TOTAL: 22,800 \$0.00	2	0			0	\$0.00	\$0.00	\$0.00
TOTAL: 0 \$0.00 \$0.00 \$0.00 3 22,800 0 0 \$0.00 \$0.00 3 22,800 \$0.00 \$0.00 \$0.00 \$0.00 r. Closets 0 \$0.00 \$0.00 \$0.00 \$0.00 TOTAL: 22,800 \$0.00 \$0.00 \$0.00 \$0.00 rinals 0 \$0.00 \$0.00 \$0.00 \$0.00 rinals 0 \$0.00 \$0.00 \$0.00 \$0.00 VoTAL: 103,477 \$0.00 \$0.00 \$0.00 \$0.00 ver Heads 0 \$0.00 \$0.00 \$0.00 \$0.00 Ver Heads 0 \$0.00 \$0.00 \$0.00 \$0.00 VoTAL: 0 0 \$0.00 \$0.00 \$0.00 \$0.00 elated 0 0 \$0.00 \$0.00 \$0.00 \$0.00 0 0 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 </td <td>ECOZ TOTAL: 0 \$0.00</td> <td>ECO2 TOTAL: 0 0 \$0.00 \$</td> <td>Misc. Sinks</td> <td>0</td> <td></td> <td></td> <td>0</td> <td>\$0.00</td> <td>\$0.00</td> <td>\$0.00</td>	ECOZ TOTAL: 0 \$0.00	ECO2 TOTAL: 0 0 \$0.00 \$	Misc. Sinks	0			0	\$0.00	\$0.00	\$0.00
FOTAL: 0 0 \$0.00 \$0.00 3 22,800 \$0.00 \$0.00 \$0.00 In Closets 0 \$0.00 \$0.00 \$0.00 Ver Heads 0 \$0.00 \$0.00 \$0.00 Ver Heads 0 \$0.00 \$0.00 \$0.00 In Closette 0 \$0.00 \$0.00 \$0.00 In Close	ECO2 TOTAL: 0 0 0 \$0.00	ECOZ TOTAL: 0 0 0 \$0.0		0			0	\$0.00	\$0.00	\$0.00
3 22,800 \$9.46 \$9.46 \$9.46 \$0.00 \$0	3 22,800 \$9.46 \$9.46 \$120.10 Water Closets 0 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 ECO3 TOTAL: 22,800 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 ECO3 TOTAL: 22,800 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 Urinals 0 \$0.0 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 ECO4 TOTAL: 103,477 0 \$0.00	3 22,800 \$9.46 \$9.46 \$120.10 Water Closets 0 \$0.00 \$0.00 \$0.00 ECO3 TOTAL: 22,800 \$0.00 \$0.00 \$0.00 ECO3 TOTAL: 22,800 \$0.00 \$0.00 \$0.00 ECO3 TOTAL: 103,477 \$0.00 \$0.00 \$0.00 ECO4 TOTAL: 103,477 \$0.00 \$0.00 \$0.00 Shower Heads 0 \$0.00 \$0.00 \$0.00 Shower Heads 0 0 \$0.00 \$0.00 Shower Heads 0 \$0.00 \$0.00 \$0.00 Equipment 0 \$0.00 \$0.00 \$0.00 Equipment 0 \$0.00 \$0.00 \$0.00 Related 0 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 COG TOTAL: 0 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 COG TOTAL: 0 0 \$0.00 \$0.00 \$0.00	ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
FCIOSETS 0 \$0.00 \$0.00 FOTAL: 22,800 \$0.00 \$0.00 FOTAL: 22,800 \$0.00 \$0.00 A 103,477 \$42.94 \$9.46 A 103,477 \$0.00 \$0.00 FOTAL: 0 \$0.00 \$0.00 FOTAL: 103,477 \$0.00 \$0.00 FOTAL: 0 \$0.00	Water Closets 0 \$0.00 \$0.00 \$0.00 \$0.00 ECO3 TOTAL: 22,800 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 ECO3 TOTAL: 103,477 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 ECO4 TOTAL: 103,477 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 ECO4 TOTAL: 103,477 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 Shower Heads 0 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 Shower Heads 0 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 ECO5 TOTAL: 0 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 Equipment 0 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 Related 0 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 ECO6 TOTAL: 0 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 <td>Water Closets 0 \$0.00</td> <td>3</td> <td>22,800</td> <td></td> <td></td> <td></td> <td>\$9.46</td> <td>\$9.46</td> <td>\$120.10</td>	Water Closets 0 \$0.00	3	22,800				\$9.46	\$9.46	\$120.10
FOTAL: 22,800 \$0.00 \$0.00 4 103,477 \$9.46 \$9.46 4 103,477 \$0.00 \$0.00 Irinals 0 \$0.00 \$0.00 Fold \$0 \$0.00 \$0.00 Ver Heads 0 \$0.00 \$0.00 FOTAL: 0 \$0.00	ECO3 TOTAL: 22,800 \$0.00	ECO3 TOTAL: 22,800 \$0.00 \$0.00 \$0.00 \$0.00 ECO3 TOTAL: 22,800 \$0.00 \$0.00 \$120,10 \$120,10 Urinals 0 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 ECO4 TOTAL: 103,477 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 ECO4 TOTAL: 103,477 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 Shower Heads 0 0 \$0.00 \$0.00 \$0.00 \$0.00 Shower Heads 0 0 \$0.00 \$0.00 \$0.00 \$0.00 Shower Heads 0 0 \$0.00 \$0.00 \$0.00 \$0.00 ECO5 TOTAL: 0 0 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 Related 0 0 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 COG TOTAL: 0 0 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 CO	Water Closets	0				\$0.00	\$0.00	\$0.00
FOTAL: 22,800 \$9.46 \$9.46 4 103,477 \$42.94 \$42.94 4 103,477 \$0.00 \$0.00 Irinals 0 \$0.00 \$0.00 FOTAL: 103,477 \$0.00 \$0.00 FOTAL: 0 0 \$0.00 ver Heads 0 0 \$0.00 ver Heads 0 0 \$0.00 Ver Heads 0 \$0.00 \$0.00 TOTAL: 0 \$0.00 \$0.00 FOTAL: 0 \$0.00 \$0.00 Injment 0 \$0.00 \$0.00 Fotal field 0	ECO3 TOTAL: 22,800 \$9.46 \$9.46 \$10.00 4 103,477 \$42.94 \$9.46 \$100.00 Urinals 0 \$0.00 \$0.00 \$0.00 ECO4 TOTAL: 103,477 \$6.00 \$0.00 \$0.00 ECO4 TOTAL: 103,477 \$6.00 \$0.00 \$0.00 Shower Heads 0 0 \$0.00 \$0.00 \$0.00 Shower Heads 0 0 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 ECO5 TOTAL: 0 0 \$0.00 <td>ECO3 TOTAL: 22,800 \$9.46 \$9.46 \$10.00 4 103,477 \$0.00 \$0.00 \$190.94 Urinals 0 \$0.00 \$0.00 \$0.00 ECO4 TOTAL: 103,477 \$0.00 \$0.00 \$0.00 ECO4 TOTAL: 103,477 0 \$0.00 \$0.00 Shower Heads 0 0 \$0.00 \$0.00 Shower Heads 0 0 \$0.00 \$0.00 ECO5 TOTAL: 0 0 \$0.00 \$0.00 ECO5 TOTAL: 0 0 \$0.00 \$0.00 Equipment 0 \$0.00 \$0.00 \$0.00 Related 0 \$0.00 \$0.00 \$0.00 Related 0 \$0.00 \$0.00 \$0.00 ECO6 TOTAL: 0 \$0.00 \$0.00 \$0.00 ECO6 TOTAL: 0 \$0.00 \$0.00 \$0.00 ECO6 TOTAL: 0 \$0.00 \$0.00 \$0.00 <td< td=""><td></td><td>0</td><td></td><td></td><td></td><td>\$0.00</td><td>\$0.00</td><td>\$0.00</td></td<></td>	ECO3 TOTAL: 22,800 \$9.46 \$9.46 \$10.00 4 103,477 \$0.00 \$0.00 \$190.94 Urinals 0 \$0.00 \$0.00 \$0.00 ECO4 TOTAL: 103,477 \$0.00 \$0.00 \$0.00 ECO4 TOTAL: 103,477 0 \$0.00 \$0.00 Shower Heads 0 0 \$0.00 \$0.00 Shower Heads 0 0 \$0.00 \$0.00 ECO5 TOTAL: 0 0 \$0.00 \$0.00 ECO5 TOTAL: 0 0 \$0.00 \$0.00 Equipment 0 \$0.00 \$0.00 \$0.00 Related 0 \$0.00 \$0.00 \$0.00 Related 0 \$0.00 \$0.00 \$0.00 ECO6 TOTAL: 0 \$0.00 \$0.00 \$0.00 ECO6 TOTAL: 0 \$0.00 \$0.00 \$0.00 ECO6 TOTAL: 0 \$0.00 \$0.00 \$0.00 <td< td=""><td></td><td>0</td><td></td><td></td><td></td><td>\$0.00</td><td>\$0.00</td><td>\$0.00</td></td<>		0				\$0.00	\$0.00	\$0.00
4 103,477 \$42.94 \$42.94 \$42.94 Irinals 0 \$0.00 \$0.00 \$0.00 FOTAL: 103,477 \$0.00 \$0.00 \$0.00 FOTAL: 0 0 \$0.00 \$0.00 ver Heads 0 0 \$0.00 \$0.00 ver Heads 0 0 \$0.00 \$0.00 VOTAL: 0 0 \$0.00 \$0.00 6 0 0 \$0.00 \$0.00 6 0 \$0.00 \$0.00 \$0.00 elated 0 \$0.00 \$0.00 \$0.00 clated 0 \$0.00 \$0.00 \$0.00 TOTAL: 0 \$0.00 \$0.00 \$0.00 Annual contraction 0 \$0.00 \$0.00 \$0.00 For the contraction \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 Contraction 0 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	4 103,477 \$42.94 \$42.94 \$190.94 Urinals 0 \$0.00 \$0.00 \$0.00 \$0.00 ECO4 TOTAL: 103,477 \$0.00 \$0.00 \$0.00 \$0.00 Shower Heads 0 \$0.00 \$0.00 \$0.00 \$0.00 Shower Heads 0 \$0.00 \$0.00 \$0.00 \$0.00 CCO5 TOTAL: 0 0 \$0.00 \$0.00 \$0.00 \$0.00 Equipment 0 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 Related 0 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 ECO6 TOTAL: 0 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 ECO6 TOTAL: 0 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 <t< td=""><td>4 103,477 \$42.94 \$42.94 \$109.44 \$100.0</td><td>ECO3 TOTAL:</td><td>22,800</td><td></td><td></td><td></td><td>\$9.46</td><td>\$9.46</td><td>\$120.10</td></t<>	4 103,477 \$42.94 \$42.94 \$109.44 \$100.0	ECO3 TOTAL:	22,800				\$9.46	\$9.46	\$120.10
rinals 0 \$0.00 \$0.00 FOTAL: 103,477 \$0.00 \$0.00 \$0.00 FOTAL: 103,477 \$0.00 \$0.00 \$0.00 FOTAL: 0 0 \$0.00 \$0.00 ver Heads 0 0 \$0.00 \$0.00 TOTAL: 0 0 \$0.00 \$0.00 FOTAL: 0 0 \$0.00 \$0.00 elated 0 0 \$0.00 \$0.00 elated 0 \$0.00 \$0.00 \$0.00 IO 0 \$0.00 \$0.00 \$0.00 IO \$0.00 \$0.00 \$0.00 \$	Urinals 0 \$0.00 \$0.00 \$0.00 ECO4 TOTAL: 0 \$0.00 \$0.00 \$0.00 ECO4 TOTAL: 103,477 \$0.00 \$0.00 \$0.00 Shower Heads 0 0 \$0.00 \$0.00 \$0.00 Shower Heads 0 0 \$0.00 \$0.00 \$0.00 \$0.00 ECO5 TOTAL: 0 0 0 \$0.00 \$0.00 \$0.00 \$0.00 Equipment 0 0 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 Related 0 0 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 ECO6 TOTAL: 0 0 \$0.00 \$0.00 \$0.00 \$0.00 ECO6 TOTAL: 0 0 \$0.00 \$0.00 \$0.00 \$0.00 ECO6 TOTAL: 0 0 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 SYSTEMS Roging \$0.00 \$0.00 \$0.00 \$0.00	Urinals 0 \$0.00 \$0.00 \$0.00 ECO4 TOTAL: 0 \$0.00 \$0.00 \$0.00 ECO4 TOTAL: 103,477 \$0.00 \$0.00 \$0.00 Shower Heads 0 0 \$0.00 \$0.00 \$0.00 Shower Heads 0 0 \$0.00 \$0.00 \$0.00 \$0.00 ECO5 TOTAL: 0 0 \$0.00 \$0.00 \$0.00 \$0.00 Equipment 0 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 Related 0 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 ECO6 TOTAL: 0 0 \$0.00 \$0.00 \$0.00 \$0.00 ECO6 TOTAL: 0 0 \$0.00 \$0.00 \$0.00 \$0.00 ECO6 TOTAL: 0 0 \$0.00 \$0.00 \$0.00 \$0.00 SYSTEMS CORP \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	4	103,477				\$42.94	\$42.94	\$190.94
TOTAL: 103,477 \$0.00 \$0.00 FOTAL: 103,477 \$42.94 \$0.00 Solution \$0 \$0.00 \$0.00 Ver Heads 0 0 \$0.00 \$0.00 TOTAL: 0 0 \$0.00 \$0.00 FOTAL: 0 0 \$0.00 \$0.00 Uipment 0 \$0.00 \$0.00 \$0.00 elated 0 \$0.00 \$0.00 \$0.00 Clated 0 \$0.00 \$0.00 \$0.00 TOTAL: 0 \$0.00 \$0.00 \$0.00	ECO4 TOTAL: 0 \$0.00 \$0.00 \$0.00 ECO4 TOTAL: 103,477 \$42.94 \$42.94 \$10.00 Shower Heads 0 0 \$0.00 \$0.00 \$0.00 Shower Heads 0 0 \$0.00	ECO4 TOTAL: 0 \$0.00 \$0.00 \$0.00 ECO4 TOTAL: 103,477 \$0.00 \$0.00 \$0.00 \$0.00 Shower Heads 0 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 Shower Heads 0 0 \$0.00 <th< td=""><td>Urinals</td><td>0</td><td></td><td></td><td></td><td>\$0.00</td><td>\$0.00</td><td>\$0.00</td></th<>	Urinals	0				\$0.00	\$0.00	\$0.00
TOTAL: 103,477 \$42.94 \$42.94 \$42.94 5 0 \$0.00 \$0.00 \$0.00 ver Heads 0 0 \$0.00 \$0.00 TOTAL: 0 0 \$0.00 \$0.00 FOTAL: 0 0 \$0.00 \$0.00 uipment 0 \$0.00 \$0.00 \$0.00 elated 0 \$0.00 \$0.00 \$0.00 clated 0 \$0.00 \$0.00 \$0.00 TOTAL: 0 0 \$0.00 \$0.00	ECO4 TOTAL: 103,477 \$103,477 \$103,477 \$100.04 \$100.04 \$100.04 \$100.04 \$100.04 \$100.00	ECO4 TOTAL: 103,477 \$42.94 \$42.94 \$190.94 5 0 \$0.00 \$0.00 \$0.00 \$0.00 Shower Heads 0 0 \$0.00 \$0.00 \$0.00 \$0.00 ECO5 TOTAL: 0 0 0 \$0.00 \$0.00 \$0.00 \$0.00 Equipment 0 0 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 Related 0 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 Related 0 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 ECO6 TOTAL: 0 0 \$0.00 \$0.00 \$0.00 \$0.00 ECO6 TOTAL: 0 0 \$0.00 \$0.00 \$0.00 \$0.00 ECO6 TOTAL: 0 0 \$0.00 \$0.00 \$0.00 \$0.00 ECO6 TOTAL: 0 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 ECO6 TOTAL: 0 0 \$0.00		0				\$0.00	\$0.00	\$0.00
5 0 \$0.00 \$0.00 \$0.00 ver Heads 0 \$0.00 \$0.00 \$0.00 \$0.00 TOTAL: 0 0 0 \$0.00 \$0.00 \$0.00 fo 0 0 \$0.00 \$0.00 \$0.00 \$0.00 clated 0 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 TOTAL: 0 0 \$0.00 \$0.00 \$0.00 \$0.00	5 0 \$0.00 \$0.00 \$0.00 \$0.00 Shower Heads 0 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 ECO5 TOTAL: 0 0 0 \$0.00 \$0.00 \$0.00 \$0.00 Equipment 0 0 \$0.00 \$0.00 \$0.00 \$0.00 Related 0 0 \$0.00 \$0.00 \$0.00 \$0.00 Related 0 0 \$0.00 \$0.00 \$0.00 \$0.00 ECO6 TOTAL: 0 0 \$0.00 \$0.00 \$0.00 \$0.00 SYSTEMS CORP \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	5 0 \$0.00 </td <td>ECO4 TOTAL:</td> <td>103,477</td> <td></td> <td></td> <td></td> <td>\$42.94</td> <td>\$42.94</td> <td>\$190.94</td>	ECO4 TOTAL:	103,477				\$42.94	\$42.94	\$190.94
ver Heads 0 \$0.00 \$0.00 TOTAL: 0 0 \$0.00 \$0.00 TOTAL: 0 0 \$0.00 \$0.00 G 0 \$0.00 \$0.00 \$0.00 uipment 0 \$0.00 \$0.00 \$0.00 elated 0 \$0.00 \$0.00 \$0.00 clated 0 \$0.00 \$0.00 \$0.00 TOTAL: 0 \$0.00 \$0.00 \$0.00	Shower Heads 0 \$0.00 \$0.00 \$0.00 ECO5 TOTAL: 0 0 \$0.00 \$0.00 \$0.00 ECO5 TOTAL: 0 0 0 \$0.00 \$0.00 \$0.00 Equipment 0 0 \$0.00 \$0.00 \$0.00 \$0.00 Related 0 0 \$0.00 \$0.00 \$0.00 \$0.00 Related 0 0 \$0.00 \$0.00 \$0.00 \$0.00 ECO6 TOTAL: 0 0 \$0.00 \$0.00 \$0.00 \$0.00 SYSTEMS CORP \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	Shower Heads 0 \$0.00 \$0.00 \$0.00 ECO5 TOTAL: 0 0 0 \$0.00 \$0.00 ECO5 TOTAL: 0 0 0 \$0.00 \$0.00 Equipment 0 0 \$0.00 \$0.00 \$0.00 Related 0 \$0.00 \$0.00 \$0.00 \$0.00 Related 0 0 \$0.00 \$0.00 \$0.00 ECO6 TOTAL: 0 0 \$0.00 \$0.00 \$0.00 ECO6 TOTAL: 0 0 \$0.00 \$0.00 \$0.00 SYSTEMS CORP \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	5	0			0	\$0.00	\$0.00	\$0.00
TOTAL: 0 \$0.00 \$0.00 6 0 0 \$0.00 \$0.00 dipment 0 \$0.00 \$0.00 \$0.00 elated 0 \$0.00 \$0.00 \$0.00 clated 0 \$0.00 \$0.00 \$0.00 TOTAL: 0 \$0.00 \$0.00 \$0.00	ECOS TOTAL: 0 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 ECOS TOTAL: 0 0 \$0.00 \$0.00 \$0.00 \$0.00 Equipment 0 0 \$0.00 \$0.00 \$0.00 \$0.00 Related 0 0 \$0.00 \$0.00 \$0.00 \$0.00 ECOG TOTAL: 0 0 \$0.00 \$0.00 \$0.00 \$0.00 SYSTEMS CORP Systems Engineering and Management Corporation, Knoxville,	ECO5 TOTAL: 0 0 \$0.00 \$	Shower Heads				0	\$0.00	\$0.00	\$0.00
FOTAL: 0 0 \$0.00 \$0.00 6 0 \$0.00 \$0.00 \$0.00 uipment 0 \$0.00 \$0.00 \$0.00 elated 0 \$0.00 \$0.00 \$0.00 o 0 \$0.00 \$0.00 \$0.00 TOTAL: 0 0 \$0.00 \$0.00	ECO5 TOTAL: 0 0 \$0.00 \$	ECO5 TOTAL: 0 0 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 Equipment 0 0 \$0.00 \$0.00 \$0.00 \$0.00 Related 0 0 \$0.00 \$0.00 \$0.00 \$0.00 ECO6 TOTAL: 0 0 \$0.00 \$0.00 \$0.00 SYSTEMS CORP Systems Engineering and Management Corporation, Knoxville,		0			0	\$0.00	\$0.00	\$0.00
00:00\$ 00:00\$ 00:00\$ 00:00\$ 00:00\$ 0 00:00\$ 0 0 <td< td=""><td>6 0 \$0.00 \$0.00 \$0.00 Equipment 0 \$0.00 \$0.00 \$0.00 Related 0 \$0.00 \$0.00 \$0.00 COG TOTAL: 0 0 \$0.00 \$0.00 ECOG TOTAL: 0 0 \$0.00 \$0.00 SYSTEMS CORP Systems Engineering and Management Corporation, Knoxville,</td><td>6 0 \$0.00 \$0.00 \$0.00 Equipment 0 \$0.00 \$0.00 \$0.00 Related 0 0 \$0.00 \$0.00 0 0 \$0.00 \$0.00 \$0.00 ECO6 TOTAL: 0 0 \$0.00 \$0.00 SYSTEMS CORP \$0.00 \$0.00 \$0.00 \$0.00 Systems Engineering and Management Corporation, Knoxville,</td><td>ECO5 TOTAL:</td><td>0</td><td>0</td><td>0</td><td>0</td><td>\$0.00</td><td>\$0.00</td><td>\$0.00</td></td<>	6 0 \$0.00 \$0.00 \$0.00 Equipment 0 \$0.00 \$0.00 \$0.00 Related 0 \$0.00 \$0.00 \$0.00 COG TOTAL: 0 0 \$0.00 \$0.00 ECOG TOTAL: 0 0 \$0.00 \$0.00 SYSTEMS CORP Systems Engineering and Management Corporation, Knoxville,	6 0 \$0.00 \$0.00 \$0.00 Equipment 0 \$0.00 \$0.00 \$0.00 Related 0 0 \$0.00 \$0.00 0 0 \$0.00 \$0.00 \$0.00 ECO6 TOTAL: 0 0 \$0.00 \$0.00 SYSTEMS CORP \$0.00 \$0.00 \$0.00 \$0.00 Systems Engineering and Management Corporation, Knoxville,	ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
1 0 \$0.00 \$0.00 1 0 \$0.00 \$0.00 1 0 \$0.00 \$0.00 1 0 \$0.00 \$0.00 2 0 \$0.00 \$0.00 3 0 0 \$0.00 4 0 0 \$0.00 5 0 0 0 0 6 0 0 0 0 0 7 0 0 0 0 0	Equipment 0 \$0.00 \$0.00 \$0.00 Related 0 \$0.00 \$0.00 \$0.00 0 0 \$0.00 \$0.00 \$0.00 ECO6 TOTAL: 0 0 \$0.00 \$0.00 \$0.00 SYSTEMS CORP Systems Engineering and Management Corporation, Knoxville,	Equipment 0 \$0.00 \$0.00 \$0.00 Related 0 \$0.00 \$0.00 \$0.00 COG TOTAL: 0 0 \$0.00 \$0.00 ECOG TOTAL: 0 0 \$0.00 \$0.00 SYSTEMS CORP Systems Engineering and Management Corporation, Knoxville,	9	0			0	\$0.00	\$0.00	\$0.00
0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00	Related 0 \$0.00 \$0.00 \$0.00 0 0 \$0.00 \$0.00 \$0.00 ECO6 TOTAL: 0 0 \$0.00 \$0.00 \$0.00 SYSTEMS CORP Systems Engineering and Management Corporation, Knoxville,	Related 0 \$0.00 \$0.00 \$0.00 0 0 \$0.00 \$0.00 \$0.00 ECO6 TOTAL: 0 0 \$0.00 \$0.00 \$0.00 SYSTEMS CORP Systems Engineering and Management Corporation, Knoxville,	Equipment	0			0	\$0.00	\$0.00	\$0.00
00.00\$ \$0.00 00.00\$ \$0.00 00.00\$ \$0.00 00.00\$ \$0.00	COG TOTAL: 0 \$0.00 \$0.00 \$0.00 SYSTEMS CORP 0 0 \$0.00 \$0.00 \$0.00 Systems Engineering and Management Corporation, Knoxville,	COG TOTAL: 0 \$0.00 <t< td=""><td>Related</td><td>0</td><td></td><td></td><td>0</td><td>\$0.00</td><td>\$0.00</td><td>\$0.00</td></t<>	Related	0			0	\$0.00	\$0.00	\$0.00
0.00\$ 0.00\$ 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ECO6 TOTAL: 0 0 \$0.00 \$	ECOG TOTAL: 0 \$0.00 \$0.00 \$0.00 SYSTEMS CORP \$0.00 \$0.00 \$0.00 \$0.00 Systems Engineering and Management Corporation, Knoxville,		0			0	\$0.00	\$0.00	\$0.00
00.0\$ 0.00 0 0 0	ECO6 TOTAL: 0 0 0 \$0.00 \$0.00 \$0.00 SYSTEMS CORP Systems Engineering and Management Corporation, Knoxville,	ECOG TOTAL: 0 0 0 \$0.00 \$0.00 \$0.00 SYSTEMS CORP Systems Engineering and Management Corporation, Knoxville,		0			0	\$0.00	\$0.00	\$0.00
	Systems Engineering and Management Corporation, Knoxville,	SYSTEMS CORP Systems Engineering and Management Corporation, Knoxville,	ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

	FY94S EEAP FT	KN	T. KNOX WALER CONSERVATION STUDY	S NO	ruby		102
	CALC	ULATI	CULATION WORK SHEET 1			DATE:	29 Oct 94
FACILITY NO.:	82		FUNCTION:		Maintenance	စ္	
Occupancy:	80		Operating Hours:	ţ	8		
ECO Number	Existing Fixture System	N C	Retrofited Fixture System	W I	Usage	Fixtures	Water Leaks
ECO Type	Public Lavatory		Spring Loaded Faucets	4.7	730	2	
Lavatory Sinks							
FCO1 TOTAL:		LPM		LPM		2	0
2							
Misc. Sinks							
ECO2 TOTAL:		LPF		LPF	#FL/YR	0	0
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	3000	2	
Water Closets			Repair Kit				
						,	(
ECO3 TOTAL:		LPF		LPF	#FL/YR	2	0
4	Wall Mounted Flush Valve	5.68	Install 1.0 GPF Flush Valve	3.79	18250	က	
Urinals			Repair Kit				
ECO4 TOTAL:		LPM		LPM	HRS/YR	3	0
5							
Shower Heads							
- W-1- C-1-		2		I DM	A STATE OF THE STA	٥	C
ECOS TOTAL:		ž L					
9							
Equipment							
Related							
ECOS TOTAL .	- 「一、「一、「一、」 「一、「一、「一、」 「一、「一、「一、」 「一、「一、「一、」 「一、「一、「一、」 「一、「一、「一、」 「一、「一、「一、」 「一、「一、「一、「一、「一、」 「一、「一、「一、「一、「一、「一、「一、「一、」 「一、「一、「一、「一、」 「一、「一、「一、「一、「一、「一、」 「一、「一、「一、「一、「一、「一、「一、「一、」 「一、「一、「一、「一、「一、「一、」 「一、「一、「一、「一、「一、」 「一、「一、「一、「一、」 「一、「一、「一、」 「一、「一、「一、」 「一、「一、「一、」 「一、「一、「一、」 「一、「一、「一、」 「一、「一、」 「一、「一、」 「一、「一、」 「一、「一、」 「一、「一、」 「一、「一、」 「一、「一、」 「一、「一、」 「一、」					c	С
ECOO IOIAL.					7)	

Systems Engineering and Management Corporation, Knoxville, TN

	FY9	FY94S EEAP		FT. KNOX W	ER CONSER	ER CONSERVATION STUDY	2 OF 2
		CA	LCULAT	ION WOF	LCULATION WORK SHEET 2		
FACILITY NO. :	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
70	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ECO Number	Annual Water	Annual	Energy 5	Saving	WATER	Total	Total
FCO Type	Saving LPY	ELEC KW	ELEC	GAS	Dollar Saving	Dollar Saving	Dollars Invested
1	12			-	\$199.04	\$211.71	\$489.60
Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO1 TOTAL:	479,610	0	0	1	\$199.04	\$211.71	\$489.60
2	0			0	\$0.00	\$0.00	\$0.00
Misc. Sinks	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
3	22,800				\$9.46	\$9.46	\$120.10
Water Closets	0				\$0.00	\$0.00	\$0.00
	0				\$0.00	\$0.00	\$0.00
ECO3 TOTAL:	22,800				\$9.46	\$9.46	\$120.10
4	103,477				\$42.94	\$42.94	\$190.94
Urinals	0	1935			\$0.00	\$0.00	\$0.00
	0				\$0.00	\$0.00	\$0.00
ECO4 TOTAL:	103,477				\$42.94	\$42.94	\$190.94
2	0			0	\$0.00	\$0.00	\$0.00
Shower Heads	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
9	0			0	\$0.00	\$0.00	\$0.00
Equipment	0			0	\$0.00	\$0.00	\$0.00
Related	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

	FY94S EEAP FT	I. KNC	T. KNOX W/ ER CONSERVATION STUDY	ON S	TUDY		1 2
	CALC	SULAT	181			DATE:	29 Oct 94
FACILITY NO.:	94		FUNCTION:	ľ	Maintenance	9	
Occupancy:			Operating Hours:	•	ω		
ECO Number	Existing Fixture System		Retrofited Fixture System	٤	Usage	Fixtures	Water Leaks
ECO Type	Description	LPM	Description	LPM	HRS/YR	Quantity	Eliminated LPY
	Public Lavatory	19	Spring Loaded Faucets	4.7	730	9	
Lavatory Sinks							
ECO1 TOTAL:		LPM		LPM		9	0
2	Service Sink	38	Install Aerators	9.5	730	20	
Misc. Sinks							
ECO2 TOTAL:		LPF		LPF	#FL/YR	20	0
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	3000		
Water Closets			Repair Kit				
ECO3 TOTAL:		LPF		LPF	#FL/YR	7	0
	Wall Mounted Flush Valve	5.68	Install 1.0 GPF Flush Valve	3.79	18250	1	
Urinals			Repair Kit				
						ļ	
ECO4 TOTAL:		LPM	では、大学の大学の大学の大学を入れている。	LPM	HKS/YR	-	0
Shower Heads							
- V							٥
ECU3 IOIAL:				M L L L		>	D
Equipment							
Related							
ECO6 TOTAL:						0	0

Systems Engineering and Management Corporation, Knoxville, TN

FACILITY NO.: Water Rate:	- to	,					
7	ָרָ ר	0.42	\$/KL		Energy Rate:		\$/KWH
94 Gas Rate:		10.51	\$/MWH		Demand Rate:		\$/KW
ECO Number Annual Water	Water	Annual	Energy S	Saving	WATER	Total	Total
	<u>}</u>	i .		GAS	Dollar Saving	Dollar Saving	Dollars Invested
4 066 830	830			10	\$1.687.73	\$1,795.21	\$1,468.80
Sinks ()	3			0	\$0.00	\$0.00	\$0.00
				0	\$0.00	\$0.00	\$0.00
ECO1 TOTAL: 4.066.830	830	0	0	9	\$1,687.73	\$1,795.21	\$1,468.80
2	000			57	\$103.61	\$703.39	\$193.92
Sinks				0	\$0.00	\$0.00	\$0.00
				0	\$0.00	\$0.00	\$0.00
FCO2 TOTAL: 24.966.000	000	0	0	57	\$103.61	\$703.39	\$193.92
	00				\$33.12	\$33.12	\$420.34
losets					\$0.00	\$0.00	\$0.00
					\$0.00	\$0.00	\$0.00
ECO3 TOTAL: 79,800	8				\$33.12	\$33.12	\$420.34
	93				\$14.31	\$14.31	\$63.65
als					\$0.00	\$0.00	\$0.00
0					\$0.00	\$0.00	\$0.00
FCO4 TOTAL: 34.493	93				\$14.31	\$14.31	\$63.65
				0	\$0.00	\$0.00	\$0.00
Heads				0	\$0.00	\$0.00	\$0.00
				0	\$0.00	\$0.00	\$0.00
FCO5 TOTAL: 0		0	0	0	\$0.00	\$0.00	\$0.00
				0	\$0.00	\$0.00	\$0.00
ment				0	\$0.00	\$0.00	\$0.00
				0	\$0.00	\$0.00	\$0.00
				0	\$0.00	\$0.00	\$0.00
0				0	\$0.00	\$0.00	\$0.00
ECO6 TOTAL: 0		0	0	0	\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

	FY94S EEAP FT. KNOX WA	KNO	X WA ER CONSERVATION STUDY	S NO	TUDY		1 2
	CALCU	LATIC				DATE:	29 Oct 94
FACILITY NO.:	86		FUNCTION:	— 1	Maintenance	9	
Occupancy:			Operating Hours:	•	80		
ECO Number	Existing Fixture System	-	Retrofited Fixture System	n		Fixtures	Water Leaks
ECO Type	匚	PM	Description	LPM	R	Quantity	Eliminated LPY
1	ý	34	Spring Loaded Faucets	34	730	2	
Lavatory Sinks							
ECO1 TOTAL:		LPM		LPM		2	0
2							
Misc. Sinks							
		ר ר		100	αΛ !⊒#	c	C
ECO2 TOTAL:		7			#LU1#		
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	3000	7	
Water Closets			Repair Kit				
FCO3 TOTAL		LPF	一 一 一 一 一 一 一 一 一 一 一 一 一 一 一 一 一 一 一	LPF	#FL/YR	_	0
4	Wall Mounted Flush Valve 5	5.68	Install 1.0 GPF Flush Valve	3.79	18250	2	
Urinals			Repair Kit				
					1		·
ECO4 TOTAL:		LPM		LPM	HRS/YR	2	0
5							
Shower Heads							
ECO5 TOTAL:		LPM		LPM		0	0
9							
Equipment							
Related							
FCO6 TOTAL			· 人名英格兰 · · · · · · · · · · · · · · · · · · ·			0	0

Systems Engineering and Management Corporation, Knoxville, TN

FACILITY NO.: Wate	Water Rate:	,			,		
2	ופו ואמנה.	0.42	\$/KL		Energy Rate:		\$/KWH
Gas	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ECO Number Ani	Annual Water	Annual	Energy 5	Saving	WATER	Total	Total
	Saving LPY	ELEC KW		GAS	Dollar Saving	Dollar Saving	Dollars Invested
	744,600			2	\$309.01	\$328.69	\$489.60
Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO1 TOTAL: 7	744,600	0	0	2	\$309.01	\$328.69	\$489.60
2	0			0	\$0.00	\$0.00	\$0.00
Misc. Sinks	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
	22,800				\$9.46	\$9.46	\$120.10
Water Closets	0				\$0.00	\$0.00	\$0.00
	0				\$0.00	\$0.00	\$0.00
ECO3 TOTAL:	22,800				\$9.46	\$9.46	\$120.10
	68,985				\$28.63	\$28.63	\$127.30
Urinals	0				\$0.00	\$0.00	\$0.00
	0				\$0.00	\$0.00	\$0.00
ECO4 TOTAL:	68,985				\$28.63	\$28.63	\$127.30
5	0			0	\$0.00	\$0.00	\$0.00
Shower Heads	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
မွ	0			0	\$0.00	\$0.00	\$0.00
Equipment	0			0	\$0.00	\$0.00	\$0.00
Related	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

	FY94S EEAP F	T. KN	FY94S EEAP FT. KNOX W. ER CONSERVATION STUDY	S NO	TUDY		1 2
	CAL	CULAT	CALCULATION WORK SHEET 1			DATE:	29 Oct 94
FACILITY NO. :	100		FUNCTION:	_,	Maintenance	ø	
Occupancy:			Operating Hours:	1	80		
ECO Number	Existing Fixture System		Retrofited Fixture System	۳.	Usage	Fixtures	Water Leaks
ECO Type	Description	LPM	Description	L R	HKS/YK	Quantity	Eliminated LPT
	Public Lavatory	15	Spring Loaded Faucets	4.7	730	3	
Lavatory Sinks							
ECO1 TOTAL:		LPM		LPM		3	0
2							
Misc. Sinks							
ECO2 TOTAL:		LPF		LPF	#FL/YR		0
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	3000	2	
Water Closets			Repair Kit				
FCO3 TOTAL		LPF		LPF	#FL/YR	2	0
4	Wall Mounted Flush Valve	5.68	Install 1.0 GPF Flush Valve	3.79	18250	1	
Urinals			Repair Kit				
ECO4 TOTAL:		LPM		LPM	HRS/YR	-	0
5							
Shower Heads							
ECO5 TOTAL:		LPM		LPM		0	0
9							
Equipment							
Related							
ECO6 TOTAL:	な 野の 最近に アイカー かいしょう かんかん ないかん					0	0

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Systems Engineering and Management Corporation, Knoxville, TN

		S	ことのになっ		LCULATION WORK SHEET 2		
	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
100 Ga	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ECO Number	Annual Water	Annual	Energy S	Saving	WATER	Total	Total
	Saving PY	ELEC		GAS	Dollar Saving	Dollar Saving	Dollars Invested
T	ώ			4	\$625.74	\$665.59	\$734.40
l avatory Sinks	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
FCO1 TOTAL:	1.507.815	0	0	4	\$625.74	\$665.59	\$734.40
				0	\$0.00	\$0.00	\$0.00
Misc. Sinks	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
FCO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
3	22 800				\$9.46	\$9.46	\$120.10
Water Closets	0001				\$0.00	\$0.00	\$0.00
	0				\$0.00	\$0.00	\$0.00
FCO3 TOTAL:	22.800				\$9.46	\$9.46	\$120.10
4	34,493				\$14.31	\$14.31	\$63.65
Urinals	0				\$0.00	\$0.00	\$0.00
	0				\$0.00	\$0.00	\$0.00
FCO4 TOTAL:	34,493				\$14.31	\$14.31	\$63.65
2	0			0	\$0.00	\$0.00	\$0.00
Shower Heads	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
FCO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
9	0			0	\$0.00	\$0.00	\$0.00
Fauipment	0			0	\$0.00	\$0.00	\$0.00
Related	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECOE TOTAL	0	o	0	0	\$0.00	\$0.00	\$0.00
1010E	,						

Systems Engineering and Management Corporation, Knoxville, TN

	FY94S EEAP FT. KNOX WA	KNO.	X WALER CONSERVATION STUDY	S NO	ruby		1
	CALC	ULATI				DATE:	29 Oct 94
FACILITY NO.:	101		FUNCTION:	_,	Maintenance	90	
Occupancy:	10		Operating Hours:		80		
ECO Number ECO Type	Existing Fixture System Description	LPM	Retrofited Fixture System Description	n LPM	Usage HRS/YR	Fixtures Quantity	Water Leaks Eliminated LPY
1 Lavatory Sinks	Public Lavatory	9.5	Spring Loaded Faucets	4.7	730	2	
ECO1 TOTAL:		D		Md		6	0
2				i			
Misc. Sinks							
FCO2 TOTAL:		- DE		<u> </u>	#FI MR	c	c
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	3000		
Water Closets			Repair Kit				
ECO3 TOTAL .		<u> </u>		100	Q	~	C
4	Wall Mounted Flush Valve	5.68	Install 1 0 GPE Flish Valve	3 79	18250	30	
Urinals	\top	3	Repair	2	10200	7	
ECO4 TOTAL:		LPM	· 大学	LPM	HRS/YR	2	0
5 Shower Heads							
ECO5 TOTAL:		LPM		LPM		0	0
9							
Equipment							
Related							
ECO6 TOTAL:						0	0

Systems Engineering and Management Corporation, Knoxville, TN

Gas Rate: 0.42 \$/KL Energy Rate: \$/KWH Formand Rate: \$/KWH \$/KWH Bollar Saving \$/KWH <	Water Rate: 0.42 \$/KL Energy Rate: \$/KWH Annual Benergy Saving WATER Total \$/KWM \$/KWH Annual Benergy Saving WATER Total \$/KWM \$/KWH Annual Water \$/KWH	ACILITY NO.: 101		S	LCULAT	IOM MOI	LCULATION WORK SHEET 2		!
Annual Water Annual Energy Saving WATER Total ELEC GAS ELEC GAS ELEC GAS Saving LPY KW KWH MWH Dollar Saving Dollar Saving LPY KW KWH MWH Dollar Saving Dollar Saving LPX S217.22 \$231.05	Cas Rate: 10.51 \$/MWH	5	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
Saving	Annual Water Annual Energy Saving LPY KW KWH 523,410 0 0 0 523,410 0 0 0 523,410 0 0 0 523,410 0 0 0 523,410 0 0 0 523,410 0 0 0 523,410 0 0 0 523,410 0 0 0 523,410 0 0 0 523,410 0 0 0 523,410 0 0 0 523,410 0 0 0 523,410 0 0 0 68,985 0 0 0 68,985 0 0 0 68,985 0 0 0 68,985 0 0 0 70		Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ks ELEC ELEC GAS Dollar Saving Dollar Saving Dollar Saving Dollar Saving Dollar Saving Percentage Percentage	ks 0 ELEC ELEC ELEC	ECO Number	Annual Water	Annual		saving	WATER	Total	Total
ks 523,410 1 \$217.22 \$231.05 ks 0 \$0.00 \$0.00 \$0.00 s 0 \$0.00 \$0.00 \$0.00 s 0 0 \$0.00 \$0.00 s 0 0 \$0.00 \$0.00 s 0 0 \$0.00 \$0.00 s 0 \$0.00 \$0.00 \$0.00 s 0 \$0.00 \$0.00 \$0.00 s \$0.00 \$0.00 \$0.00 d \$0.00 \$0.00	ks 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ECO Type		ELEC KW	ELEC	GAS MWH	Dollar Saving	Dollar Saving	Dollars Invested
ks 0 \$0.00 \$0.00 strain 0 \$0.00 \$0.00 strain 0 \$0.00 \$0.00 s 0 \$0.00 \$0.00 s 0 \$0.00 \$0.00 s 0 \$0.00 \$0.00 s 0 \$0.00 \$0.00 sts 0 \$0.00 \$0.00 sts 0 \$0.00 \$0.00 sts 0 \$0.00 \$0.00 sts 0 \$0.00 \$0.00 strain \$0.00 \$0.00 \$0.00 strain \$0.00 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 d \$0.00 \$0.00 \$0.00 d \$0.00 \$0.00 \$0.00 d \$0.00 \$0.00 \$0.00 d \$0.00 \$0.00 \$0.00 d	ks 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1	臣			1	\$217.22	\$231.05	\$489.60
0 0 \$0.00 \$0.00 523,410 0 0 \$0.00 s 0 \$0.00 \$0.00 s \$0.00 \$0.00 \$0.00 s \$0.00 \$0.00 \$0.00 s \$0.00 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 t \$0.00 \$0.00 \$0.00 t \$0.00 \$0.00 \$0.00 t \$0.00 <th< td=""><td>523,410 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0</td><td>Lavatory Sinks</td><td>0</td><td></td><td></td><td>0</td><td>\$0.00</td><td>\$0.00</td><td>\$0.00</td></th<>	523,410 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
523,410 0 1 \$217.22 \$231.05 5 0 \$0.00 \$0.00 \$0.00 5 0 0 \$0.00 \$0.00 6 0 \$0.00 \$0.00 \$0.00 34,200 \$0.00 \$0.00 \$0.00 68,985 \$0.00 \$0.00 \$0.00 68,985 \$0.00 \$0.00 \$0.00 68,985 \$0.00 \$0.00 \$0.00 68,985 \$0.00 \$0.00 \$0.00 68,985 \$0.00 \$0.00 \$0.00 68,985 \$0.00 \$0.00 \$0.00 68,985 \$0.00 \$0.00 \$0.00 68,985 \$0.00 \$0.00 \$0.00 68,985 \$0.00 \$0.00 \$0.00 68,985 \$0.00 \$0.00 \$0.00 68,985 \$0.00 \$0.00 \$0.00 68,986 \$0.00 \$0.00 \$0.00 68,986 \$0.00 \$0.00	S 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		0			0	\$0.00	\$0.00	\$0.00
s 0 \$0.00 \$0.00 s 0 \$0.00 \$0.00 d 0 \$0.00 \$0.00 s 0 \$0.00 \$0.00 s 0 \$0.00 \$0.00 s 0 \$0.00 \$0.00 s \$0.00 \$0.00 \$0.00 s \$0.00 \$0.00 \$0.00 d	s 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		523,410	0	0	-	\$217.22	\$231.05	\$489.60
s 0 \$0.00 \$0.00 o 0 \$0.00 \$0.00 d \$0.00 \$0.00 \$0.00 45.200 \$0.00 \$0.00 \$0.00 45.200 \$0.00 \$0.00 \$0.00 45.200 \$0.00 \$0.00 \$0.00 68,985 \$0.00 \$0.00 \$0.00 68,985 \$0.00 \$0.00 \$0.00 68,985 \$0.00 \$0.00 \$0.00 68,985 \$0.00 \$0.00 \$0.00 68,985 \$0.00 \$0.00 \$0.00 60 \$0.00 \$0.00 \$0.00 68,985 \$0.00 \$0.00 \$0.00 68,985 \$0.00 \$0.00 \$0.00 60 \$0.00 \$0.00 \$0.00 60 \$0.00 \$0.00 \$0.00 60 \$0.00 \$0.00 \$0.00 60 \$0.00 \$0.00 \$0.00 60 \$0.00 \$0.00 </td <td>s 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0</td> <td>2</td> <td>0</td> <td></td> <td></td> <td>0</td> <td>\$0.00</td> <td>\$0.00</td> <td>\$0.00</td>	s 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2	0			0	\$0.00	\$0.00	\$0.00
0 0 \$0.00 \$0.00 10 0 \$0.00 \$0.00 34,200 \$0.00 \$0.00 \$0.00 45,200 \$0.00 \$0.00 \$0.00 45,200 \$0.00 \$0.00 \$0.00 68,985 \$0.00 \$0.00 \$0.00 68,985 \$0.00 \$0.00 \$0.00 68,985 \$0.00 \$0.00 \$0.00 68,985 \$0.00 \$0.00 \$0.00 68,985 \$0.00 \$0.00 \$0.00 68,985 \$0.00 \$0.00 \$0.00 68,985 \$0.00 \$0.00 \$0.00 68,985 \$0.00 \$0.00 \$0.00 68,985 \$0.00 \$0.00 \$0.00 68,985 \$0.00 \$0.00 \$0.00 68,985 \$0.00 \$0.00 \$0.00 68,986 \$0.00 \$0.00 \$0.00 70 \$0.00 \$0.00 \$0.00 \$0.00 80 <td>ts 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0</td> <td>Misc. Sinks</td> <td>0</td> <td></td> <td></td> <td>0</td> <td>\$0.00</td> <td>\$0.00</td> <td>\$0.00</td>	ts 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Misc. Sinks	0			0	\$0.00	\$0.00	\$0.00
0 0 \$0.00 \$0.00 34,200 \$14.19 \$14.19 \$14.19 18 0 \$0.00 \$0.00 \$0.00 34,200 \$0.00 \$0.00 \$0.00 \$0.00 68,985 \$14.19 \$14.19 \$14.19 0 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 1 \$0 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 1 \$0 \$0.00 \$0.00 1 \$0 \$0.00 \$0.00 1 \$0 \$0.00 \$0.00 1 \$0 \$0.00 \$0.00 2 \$0.00 \$0.00 3 \$0.00 \$0.00 4 \$0 \$0.00 \$0.00 4 \$0 \$0.00 \$0.00 <	ts 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		0			0	\$0.00	\$0.00	\$0.00
15.200 \$14.19 \$14.19 \$14.19 15.200 \$0.00 \$0.00 \$0.00 16.200 \$0.00 \$0.00 \$0.00 16.985 \$14.19 \$14.19 \$14.19 16.985 \$14.19 \$14.19 \$14.19 16.985 \$14.19 \$14.19 \$14.19 17.200 \$14.19 \$14.19 \$14.19 18.000 \$14.19 \$14.19 \$14.19 19.000 \$14.19 \$14.19 \$14.19 10.000 \$10.00 \$10.00 \$10.00 10.000 \$10.00 \$10.00 \$10.00 10.000 \$10.00 \$10.00 \$10.00 10.000 \$10.00 \$10.00 \$10.00 10.000 \$10.00 \$10.00 \$10.00 \$10.00 10.000 \$10.00 \$10.00 \$10.00 \$10.00 \$10.00 \$10.00 \$10.00 \$10.00 \$10.00 \$10.00 \$10.00 \$10.00 \$10.00 \$10.00 \$10.00 \$10.00	ts 0 0 0 0 34,200 0 68,985 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	CO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
tfs 0 \$0.00 \$0.00 34,200 \$0.00 \$0.00 \$0.00 68,985 \$14.19 \$14.19 \$14.19 68,985 \$0.00 \$0.00 \$0.00 68,985 \$0.00 \$0.00 \$0.00 68,985 \$0.00 \$0.00 \$0.00 68,985 \$0.00 \$0.00 \$0.00 68,985 \$0.00 \$0.00 \$0.00 68,985 \$0.00 \$0.00 \$0.00 68,985 \$0.00 \$0.00 \$0.00 68,985 \$0.00 \$0.00 \$0.00 68,985 \$0.00 \$0.00 \$0.00 60 \$0.00 \$0.00 \$0.00 60 \$0.00 \$0.00 \$0.00 7 \$0.00 \$0.00 \$0.00 8 \$0.00 \$0.00 \$0.00 9 \$0.00 \$0.00 \$0.00 9 \$0.00 \$0.00 \$0.00 9 \$0.00 <	ts 0 34,200 68,985 0 0 0 0 t 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3	34,200				\$14.19	\$14.19	\$180.14
0 \$0.00 \$0.00 34,200 \$14.19 \$14.19 \$0.00 68,985 \$28.63 \$28.63 \$28.63 0 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 4s 0 \$0.00 \$0.00 4s 0 \$0.00 \$0.00 4s 0 \$0.00 \$0.00 4c 0 \$	ds 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Water Closets	0				\$0.00	\$0.00	\$0.00
34,200 \$14.19 \$14.19 68,985 \$28.63 \$28.63 0 \$0.00 \$0.00 68,985 \$0.00 \$0.00 cs,985 \$0.00 \$0.00 ds 0 \$0.00 ds 0 \$0.00 ds 0 \$0.00 t \$0.00 \$0.00	34,200 68,985 0 0 0 0 0 0 0 0 0 0 0 0 0	And the second s	0				\$0.00	\$0.00	\$0.00
68,985 \$28.63 \$28.63 0 \$0.00 \$0.00 0 \$0.00 \$0.00 68,985 \$0.00 \$0.00 68,985 \$0.00 \$0.00 0 \$0.00 \$0.00 ds 0 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00	68,985 0 0 68,985 0 0 0 0 0 0 0 0 0 0 0 0 0	CO3 TOTAL:	34,200				\$14.19	\$14.19	\$180.14
0 \$0.00 \$0.00 0 \$0.00 \$0.00 1 68,985 \$28.63 \$28.63 1 0 \$0.00 \$0.00 1 0 \$0.00 \$0.00 1 0 \$0.00 \$0.00 1 0 \$0.00 \$0.00 1 0 \$0.00 \$0.00 1 0 \$0.00 \$0.00 1 0 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	4	68,985				\$28.63	\$28.63	\$127.30
68,985 \$0.00 \$0.00 \$0.00 ads 0 \$0.00 \$0.00 1 0 \$0.00 \$0.00 1 0 \$0.00 \$0.00 1 0 0 \$0.00 1 0 \$0.00 \$0.00 1 0 \$0.00 \$0.00 1 0 \$0.00 \$0.00 1 0 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Urinals	0				\$0.00	\$0.00	\$0.00
68,985 \$28.63 \$28.63 ads 0 \$0.00 \$0.00 1ds 0 \$0.00 \$0.00 1 0 \$0.00 \$0.00 1 0 \$0.00 \$0.00 1 0 \$0.00 \$0.00 1 0 \$0.00 \$0.00 1 0 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00	8,985 0 0 0 0 0 0 0 0 0 0 0 0		0				\$0.00	\$0.00	\$0.00
ads 0 \$0.00 \$0.00 ads 0 \$0.00 \$0.00 : 0 0 \$0.00 \$0.00 : 0 0 \$0.00 \$0.00 nt 0 \$0.00 \$0.00 \$0.00 I 0 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00	0 0 0 0 0 0	CO4 TOTAL:	68,985				\$28.63	\$28.63	\$127.30
ads 0 \$0.00 \$0.00 : 0 0 \$0.00 \$0.00 : 0 0 \$0.00 \$0.00 int 0 0 \$0.00 \$0.00 I 0 \$0.00 \$0.00 \$0.00	0 0 0 0 0	5	0			0	\$0.00	\$0.00	\$0.00
.: 0 0 0 \$0.00 \$0.00	0 0 0 0 0	Shower Heads	0			0	\$0.00	\$0.00	\$0.00
.: 0 0 \$0.00 \$0.00 nt 0 \$0.00 \$0.00 \$0.00 nt 0 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00	0 0 0 0		0			0	\$0.00	\$0.00	\$0.00
30.00\$ 00.0\$ 30.00\$ 0.00\$ 30.00\$ 0	0 0 0 0 0	CO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
t 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00	0 0 0 0 0 0	9	0			0	\$0.00	\$0.00	\$0.00
00.0\$ 0.00\$ 0 00.0\$ 0.00\$ 0 0 \$0.00\$ 0	0 0 0	Equipment	0			0	\$0.00	\$0.00	\$0.00
0 \$0.00 \$0.00	0 0 0	Related	0			0	\$0.00	\$0.00	\$0.00
00.08 0 \$0.00	0 0 0		0			0	\$0.00	\$0.00	\$0.00
30 C# 30 C#	0 0 0		0			0	\$0.00	\$0.00	\$0.00
		CO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

	FY94S EEAP FT	F. KNOX W	X W. ER CONSERVATION STUDY	ON ST	Yau.		1 2
	CALC	ULATIC	151			DATE:	29 Oct 94
FACILITY NO. :	119		FUNCTION:	2	Maintenance	Ф	
Occupancy:	15		Operating Hours:		8		
ECO Number	Existing Fixture System Description	LPM	Retrofited Fixture System Description	P.W	Usage HRS/YR	Fixtures Quantity	Water Leaks Eliminated LPY
1	ý	15	Spring Loaded Faucets	4.7	730	9	
Lavatory Sinks					ę.		
ECO1 TOTAL:		LPM		LPM		9	0
2 Misc. Sinks							
FCO2 TOTAL:		LPF		LPF	#FL/YR	0	0
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	18250	2	
Water Closets			Repair Kit				
FCO3 TOTAL:		LPF		LPF	#FL/YR	5	0
4	Wall Mounted Flush Valve	5.68	Install 1.0 GPF Flush Valve	3.79	18250	3	
Urinals			Repair Kit				
ECOA TOTAL		DM -		L PM	HRS/YR	8	0
5							
Shower Heads							
FCO5 TOTAL:		LPM		LPM		0	0
9							
Related							
ECO6 TOTAL:						0	0
SYSTEMS CORP	SORP	System	Systems Engineering and Management Corporation,	nent Cc	orporation		Knoxville, TN

Systems Engineering and Management Corporation, Knoxville, TN

Gas Rate: 0.42 \$/KL Energy Rate: \$/KWH ELEC ELEC GAS ELEC ELEC GAS GAS B \$/LSE1.49 \$/LSB1.18 \$/LSB1.48 \$/LSB1.49 \$/LSB1.49 \$/LSB1.49 \$/LSB1.48 \$/LSB1.48 \$/LSB1.49 \$/LSB1.48 \$/LSB1.49 \$/LSB1.48 \$/LSB1.48 \$/LSB1.48 \$/LSB1.48 \$/LSB1.49 \$/LSB1.48 \$/LSB1.49 \$/LSB1.48 \$/LSB1.49 \$/LSB1.48 \$/LSB1.49 \$/LSB1.48 \$/LSB1.49 \$/LSB1.48 \$/LSB1.48 \$/LSB1.48 \$/LSB1.48 \$/LSB1.48 \$/LSB1.48 \$/LSB1.48 \$/LSB1.48 \$/LSB1.49 \$/LSB1.48 \$/LSB1.49 \$/LSB1.48 \$/LSB1.49 \$/LSB1.48 \$/LSB1.49 \$/LSB1.48 \$/LSB1.49 \$/LSB1.48 \$/LSB1.49	FACILITY NO. : Water Rate: 0.42 \$/KL 119 Gas Rate: 10.51 \$/MWH ECO Number Annual Water Annual Energy S ELEC ELEC	Case Rate: 10.51 \$/MVM Demand Rate: S/MVM Saving LPY KW KWH MWH Dollar Saving S/0.00 S/0.	Saving LPY Saving LPY Saving LPY Saving LPY KW KWH MWH Saving LPY Saving LPY KW KWH MWH Saving LPY KW KWH MWH Saving LPY KW KWH MWH Saving LPY Saving LPY KW KWH MWH Saving LPY Saving LPY KW KWH MWH Saving LPY Saving LP		
Type Saving LPY KW KWH MWH	T19 Gas Rate: 10.51 \$/MWH	T19 Gas Rate: 10.51 \$/MWH	T19 Gas Rate: 10.51 \$/MWH Number Annual Water ELEC ELEC GAS O TOTAL: 3,015,630 TOTAL: 3,015,630 Sc. Sinks 0 TOTAL: 3,015,630 TOTAL: 3,0477 Ser Closets 0 TOTAL: 346,750 TOTAL: 0 TOTAL: 0	\$/KWH	
O Number Annual Water Annual Energy Saving WATER Total 10 Type Saving ELEC ELEC GAS S0.00 S0.00 10 Sinks 0 0 0 \$0.00 \$0.00 \$0.00 10 TOTAL: 3,015,630 0 0 \$0.00 \$0.00 \$0.00 10 Sinks 0 0 0 \$0.00 \$0.00 \$0.00 10 Sc. Sinks 0 0 0 \$0.00 \$0.00 \$0.00 10 Sc. Sinks 0 0 0 \$0.00 \$0.00 \$0.00 10 Sc. Sinks 0 0 0 \$0.00 \$0.00 \$0.00 10 Sc. Sinks 0 0 0 \$0.00 \$0.00 \$0.00 10 TOTAL: 0 0 0 \$0.00 \$0.00 \$0.00 10 TAL: 346,750 0 \$0.00 \$0.00 \$0.00 \$0.00 10 TAL: 103,477 \$0.00 \$0.00 \$0.00	ECO Number Annual Water Annual ELEC ELEC ELEC ELEC ELEC ELEC ELEC ELE	ECO Number Annual Water Annual ELEC	Number Annual Water Annual Energy Saving 1 3,015,630 ELEC ELEC GAS 1 3,015,630 0 0 0 1 3,015,630 0 0 0 2 0 0 0 0 2 0 0 0 0 2 0 0 0 0 2 0 0 0 0 2 0 0 0 0 2 0 0 0 0 3C. Sinks 0 0 0 0 346,750 0 0 0 0 TOTAL: 346,750 0 0 0 TOTAL: 103,477 0 0 0 5 0 0 0 0 TOTAL: 0 0 0 0 5 0 0 0 0 6	\$/KW	
CO Type Saving LPY KWH KWH MWH MWH MWH Dollar Saving 51.05 Pollar Saving 50.00 Pollar Sa	ECO Type Saving LPY KW KWH LEC ELEC ELEC ELEC Lavatory Sinks 0 0 Lavatory Sinks 0 0 ECO1 TOTAL: 3,015,630 0 Misc. Sinks 0 0 Misc. Sinks 0 0 ECO2 TOTAL: 0 0 Water Closets 0 0 Urinals 0 0 ECO3 TOTAL: 346,750 0 ECO4 TOTAL: 0 0 ECO4 TOTAL: 0 0 ECO5 TOTAL: 0 0 ECO5 TOTAL: 0 0 ECO5 TOTAL: 0 0 ECO5 TOTAL: 0 0 Equipment 0 0 Equipment 0 0 ECO6 TOTAL: 0 0	ECO Type Saving LPY KW KWH 1 3,015,630 Lavatory Sinks 0 CCO1 TOTAL: 3,015,630 0 ECO1 TOTAL: 3,015,630 0 Misc. Sinks 0 0 Misc. Sinks 0 0 ECO2 TOTAL: 0 0 Water Closets 0 0 ECO3 TOTAL: 346,750 0 ECO3 TOTAL: 0 0 ECO4 TOTAL: 0 0 ECO5 TOTAL: 0 0 Equipment 0 0 ECO5 TOTAL: 0 0 ECO6 TOTAL: 0 0 ECO6 TOTAL: 0 0	CO Type Saving LPY KW KWH MWH <		-E
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Systems Engineering and Management Corporation, Knoxville, TN

Existing Fixture System Existing Fixture System Description Description Description Description Description LPM Service Sink Floor Mounted Flush Valve LPF Wall Mounted Flush Valve LPM LPM LPM LPM LPM LPM LPM LP		FY94S EEAP FT		KNOX WA R CONSERVATION STUDY	FION S	TUDY		1 2
121 Commissary		CAL	CULAT	ION WORK SHEET 1			DATE:	31 Oct 94
Existing Fixture System Retrofited Fixture System Usage Fixtures	FACILITY NO.:	:	·	FUNCTION:		Commissa	, in	
Existing Fixture System Retrofited Fixture System LPM Description LPM HRS/YR Quantity Description LPM A 7 130 14 Public Lavatory 15 Spring Loaded Faucets 4.7 130 14 Service Sink 45 Install Aerators 9.5 183 5 Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 14000 10 Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 29000 4 Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 29000 4 LPM Repair Kit LPM HRS/YR 4	ccupancy:			Operating Hours:		24	,	
Public Lavatory 15 Spring Loaded Faucets 4.7 130 144	ECO Number	Existing Fixture System		Retrofited Fixture Syste	m	Usage	Fixtures	Water Leaks
Public Lavatory 15 Spring Loaded Faucets 4.7 130 14	ECO Type	Description	LPM	Description	LPM	HRS/YR	Quantity	Eliminated LPY
LPM		Public Lavatory	15	Spring Loaded Faucets	4.7	130	14	
Service Sink 45 Install Aerators 9.5 183 5	Lavatory Sinks							
Service Sink 45 Install Aerators 9.5 183 5	CO1 TOTAL:		LPM		LPM		14	0
LPF	2	Service Sink	45	Install Aerators	9.5	183	5	
LPF	Misc. Sinks			O				
Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 14000 10								
Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 14000 10	CO2 TOTAL:		LPF		LPF	#FL/YR	5	0
PE Repair Kit LPF #FL/YR 10	က	Floor Mounted Flush Valve	17	3.5 GPF	13.2	14000	10	
Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 10 4 Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 29000 4 ILPM Repair Kit 4 ILPM HRS/YR 4 ILPM ILPM 0	Water Closets			Repair Kit				
Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 29000 4 Repair Kit	CO3 TOTAL				- -	471 7/5		•
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Repair Kit	4	Wall Mounted Flush Valve	5.68	1.0 GPF	3.79	29000	4	
LPM HRS/YR 4 LPM LPM CO LPM CO	Urinals			Repair Kit			AND THE PROPERTY OF THE PROPER	
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	Shower Heads							
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	Equipment							
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・	COS TOTAL .							
	200 101AL :)	0

Systems Engineering and Management Corporation, Knoxville, TN

	FYS	FY94S EEAF	P FT. KNOX W	VOX W	ER CONSER	ER CONSERVATION STUDY	2 OF 2
		CA	LCULAT	ION WOF	CALCULATION WORK SHEET 2		
FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
7	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ECO Number	Annual Water	Annual	Energy S	Saving	WATER	Total	Total
ECO Type	Saving LPY	ELEC	ELEC KWH	GAS	Dollar Saving	Dollar Saving	Dollars Invested
1	1,253,070			3	\$520.02	\$550.13	\$3,427.20
Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
ECO1 TOTAL:	1,253,070	0	0	က	\$520.02	\$550.13	\$3.427.20
2	1,948,950			4	\$8.09	\$54.91	\$48.48
Misc. Sinks							
ECO2 TOTAL:	1,948,950	0	0	4	\$8.09	\$54.91	\$48.48
3	532,000				\$220.78	\$220.78	\$600.48
Water Closets							*
ECO3 TOTAL:	532,000				\$220.78	\$220.78	\$600.48
4	219,240				\$6.06\$	\$6.06\$	\$254.59
Urinals							
ECO4 TOTAL:	219,240				\$90.98	\$90.98	\$254.59
Shower Heads	0			0	\$0.00	\$0.00	\$0.00
2000							
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
9							
Related							
ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
SYSTEMS CORP	ORP			Systems	Engineering and	d Management Corp	Systems Engineering and Management Corporation, Knoxville, TN

Systems Engineering and Management Corporation, Knoxville, TN

	EV94S FEAD FT KNOX W	KNY	X W FR CONSERVATION STIIDY	NO	TIIDY		1
	CALC	AT I				DATE	29 Oct 94
FACILITY NO. :	158		FUNCTION:		Maintenance	9	
Occupancy:			Operating Hours:	'	80		
ECO Number	Existing Fixture System		Retrofited Fixture System	E	Usage	Fixtures	Water Leaks
ECO Type	Description	LPM	Description	LPM	HRS/YR	Quantity	Eliminated LPY
_	Public Lavatory	37.9	Spring Loaded Faucets	4.7	730	4	
Lavatory Sinks	The state of the s						
ECO1 TOTAL:		LPM		LPM	### ### ### ### ### ### ### ###	4	0
2							
Misc. Sinks							
ECO2 TOTAL:		LPF		LPF	#FL/YR	0	0
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	3000	9	
Water Closets			Repair Kit				
		1	"我这个好好,这个有话是不是一个是是一	- -	#CI \\D	ű	
ECO3 IOIAL:		777		7 0			>
4 Urinals	Wall Mounted Flush Valve	5.68	Install 1.0 GPF Flush Valve Repair Kit	3.79	18250	7	
ECO4 TOTAL:		LPM		LPM	HRS/YR	2	0
5 Shower Heads							
1		-		7.0			
ECOS IOIAL:		Z L				>	
Farinment							
Dolotod							
Nelated							
ECO6 TOTAL:	《· · · · · · · · · · · · · · · · · · ·		第三章 · 第二章 ·			0	0
SYSTEMS CORP	CORP	Syster	Systems Engineering and Management Corporation,	ment C	orporation		Knoxville, TN

Systems Engineering and Management Corporation, Knoxville, TN

						אל פטבבד א	
		CA	COLAI	OW NO	LCULATION WORK SHEET 2		
FACILITY NO.: W	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ECO Number A	Annual Water	Annual		Saving	WATER	Total	Total
ECO Type	Savina LPY	ELEC	ELEC	GAS	Dollar Saving	Dollar Saving	Dollars Invested
	5	1		15	\$2,499.34	\$2,658.49	\$979.20
Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO1 TOTAL:	6,022,500	0	0	15	\$2,499.34	\$2,658.49	\$979.20
2	0			0	\$0.00	\$0.00	\$0.00
Misc. Sinks	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
3	68,400				\$28.39	\$28.39	\$360.29
Water Closets	0				\$0.00	\$0.00	\$0.00
	0				\$0.00	\$0.00	\$0.00
ECO3 TOTAL:	68,400				\$28.39	\$28.39	\$360.29
4	68,985				\$28.63	\$28.63	\$127.30
Urinals	0				\$0.00	\$0.00	\$0.00
	0				\$0.00	\$0.00	\$0.00
ECO4 TOTAL:	68,985				\$28.63	\$28.63	\$127.30
5	0			0	\$0.00	\$0.00	\$0.00
Shower Heads	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
9	0			0	\$0.00	\$0.00	\$0.00
Equipment	0			0	\$0.00	\$0.00	\$0.00
Related	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

	FY94S EEAP FT. KNOX W.	T. KN	X W. ER CONSERVATION STUDY	SNO	TUDY		1
	CAL	CULAT				DATE:	29 Oct 94
FACILITY NO.:	171		FUNCTION:		Maintenance	90	
Occupancy:	2		Operating Hours:		8		
ECO Number	Existing Fixture System		Retrofited Fixture System	٤	Usage	Fixtures	Water Leaks
ECO Type	ription		Description	LPM	HRS/YR	Quantity	Eliminated LPY
1 Lavatory Sinks	Public Lavatory	9.5	Spring Loaded Faucets	4.7	730	~	
ECO1 TOTAL:		MdT		LPM		1	0
2 Misc. Sinks	Service Sink	27	Install Aerators	9.5	730	7-	
ECO2 TOTAL:		LPF		I PF	#FL/YR	-	0
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	3000	-	
Water Closets		-	Repair Kit	1.01	800	-	
ECO3 TOTAL:		LPF		LPF	#FL/YR	-	0
4	Wall Mounted Flush Valve	5.68	Install 1.0 GPF Flush Valve	3.79	18250	-	
Urinals			Repair Kit				
ECO4 TOTAL:	A Comment of the Comm	LPM		LPM	HRS/YR	-	0
5 Shower Heads							
		1					
ECOS IOIAL:		LPM		LPM		0	0
Equipment							
Related							
ECO6 TOTAL:						0	0

Systems Engineering and Management Corporation, Knoxville, TN

FACILITY NO.: Water Rate: 0.42 \$/KL Energy Rate: 171 Gas Rate: 10.51 \$/MWH Demand Rate: ECO Number Annual Water Annual ELEC ELEC GAS WATER ECO Type Saving LPY KWH MWH Dollar Saving 1 261,705 1 \$108.61 Lavatory Sinks 0 0 \$0.00 ECO1 TOTAL: 261,705 0 \$0.00 ECO1 TOTAL: 261,705 0 1 \$108.61	Total Total Dollar Saving \$115.52 \$0.00 \$0.00 \$115.52	\$/KWH
Gas Rate: 10.51 \$/MWH D ber Annual Water Annual ELEC ELEC ELEC GAS se Saving LPY KW KWH MWH inks 0 0 0 inks 0 0 0 261,705 0 0 261,705 0 1	Total Dollar Saving \$115.52 \$0.00 \$0.00 \$115.52	%/KW
ber Annual Water Annual Energy Saving ELEC ELEC GAS ELEC ELEC GAS 261,705 0 0 0 1 261,705 0 1 261,705 0 1		
be Saving LPY KW KWH MWH NWH 261,705 0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		Total
inks 261,705 1 0 0 0 0 0 0 -: 261,705 0 0 1		Dollars Invested
inks 0 0 0 0 0 0 0 0 0 0 1	\$0.00 \$0.00 \$115.52	\$244.80
0 0 0 0 = 0 = 0 = 0 = 1 = 0	\$0.00 \$115.52	\$0.00
.: 261,705 0 0 1	\$115.52	\$0.00
The second secon	- 624 BD	\$244.80
766,500	\$4.1.00	\$9.70
0	\$0.00	\$0.00
0 . 0	\$0.00	\$0.00
0 0 2	\$21.60	\$9.70
11,400	\$4.73	\$60.05
	\$0.00	\$0.00
	\$0.00	\$0.00
ECO3 TOTAL: 11,400 \$4.73	\$4.73	\$60.05
93	\$14.31	\$63.65
Urinals 0 \$0.00	\$0.00	\$0.00
0	\$0.00	\$0.00
ECO4 TOTAL: 34,493 \$14.31	\$14.31	\$63.65
0 0	\$0.00	\$0.00
	\$0.00	\$0.00
0 0	\$0.00	\$0.00
0 0 0	\$0.00	\$0.00
	\$0.00	\$0.00
nt 0 0	\$0.00	\$0.00
0	\$0.00	\$0.00
0	\$0.00	\$0.00
0 00:0\$	\$0.00	\$0.00
0 0 0	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

	FY94S FFAP FT	T KN	KNOX WA R CONSFRVATION STIINY	NO.	TIIDY		1 2
	CALC	CULAT	CALCULATION WORK SHEET 1			DATE:	31 Oct 94
FACILITY NO. :	400		FUNCTION:		Library		
Occupancy:			Operating Hours:		6		
ECO Number	Existing Fixture System		Retrofited Fixture System	E	Usage	Fixtures	Water Leaks
ECO Type	Description	LPM	Description	I LPM	HRS/YR	Quantity	Eliminated LPY
_	Public Lavatory	9.5	Spring Loaded Faucets	4.7	130	3	
Lavatory Sinks	Public Lavatory	15	Spring Loaded Faucets	4.7	130	2	
FCO1 TOTAL		∑		DM DM		ď	c
2		i				,	
Misc. Sinks							
ECO2 TOTAL:		LPF	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	LPF	#FL/YR	0	0
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	1300	5	
Water Closets			Repair Kit				
ECO3 TOTAL:		LPF	보는 이 상품이 발생하게 하는 보다면 보다면 보다면 보다.	LPF	#FL/YR		0
4	Wall Mounted Flush Valve	5.68	Install 1.0 GPF Flush Valve	3.79	1300	2	
Urinals			Repair Kit				
ECO4 TOTAL:		LPM		PM	HRS/YR	2	0
5							
Shower Heads							
ECO5 TOTAL:		LPM		LPM	STATE OF THE STATE	0	0
9							
Equipment			•				
Related							
ECO6 IOIAL:							0

Systems Engineering and Management Corporation, Knoxville, TN

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	FY9	4S EEA	FY94S EEAP FT. KNOX V	NOX V	FER CONSER	TER CONSERVATION STUDY	2 OF 2
		Ö	ALCULAT	TION WOI	CALCULATION WORK SHEET 2		
FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ECO Number	Annual Water	Annua	Energy	Saving	WATER	Total	Total
ECO Type	Saving LPY	KW KW	ELEC	GAS MWH	Dollar Saving	Dollar Saving	Dollars Invested
1	139,815			0	\$58.02	\$61.38	\$734.40
Lavatory Sinks	179,010			0	\$74.29	\$78.59	\$489.60
ECO1 TOTAL:	318,825	0	0	-	\$132.31	\$139.97	\$1.224.00
2	0			0	\$0.00	\$0.00	\$0.00
Misc. Sinks							
ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
က	24,700				\$10.25	\$10.25	\$300.24
Water Closets							
ECO3 TOTAL:	24.700				\$10.25	\$10.25	\$300 24
4	4 914				\$2.04	\$2 OA	¢107 30
Urinals					10.25	10.14 10.14	00.171.
ECO4 TOTAL:	4,914				\$2.04	\$2.04	\$127.30
5	. 0			0	\$0.00	\$0.00	\$0.00
Shower Heads							
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
9							
Equipment							
Related							
ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
SYSTEMS CORP	ORP			Systems	Engineering and	Management Corp	Systems Engineering and Management Corporation, Knoxville, TN

Systems Engineering and Management Corporation, Knoxville, TN

	FY94S EEAP FT. KNOX WA	r. KNC	OX WALL R CONSERVATION STUDY	S NO	TUDY		1 2
	CALC	SULAT				DATE:	31 Oct 94
FACILITY NO.:	469		FUNCTION:	—,	Firehall/Turrett News	rrett News	
Occupancy:	27		Operating Hours:	•	24		
ECO Number	Existing Fixture System	1	Retrofited Fixture System	٤	Usage	Fixtures	Water Leaks
ECO Type	Description	LPM	Description	LPM	HRS/YR	Quantity	Eliminated LPY
	Public Lavatory	9.5	Spring Loaded Faucets	4.7	365	6	
Lavatory Sinks							
ECO1 TOTAL:		LPM	いるのでは、我的のないなどのないないというです。	LPM	Me Car		0
2	Laundry	45	Install Aerators	9.5	365	2	
Misc. Sinks							
ECO2 TOTAL:		LPF		LPF	#FL/YR	2	0
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	3800	8	
Water Closets			Repair Kit				
ECO3 TOTAL:		LPF		LPF	#FL/YR		0
4	Wall Mounted Flush Valve	2.68	Install 1.0 GPF Flush Valve	3.79	3800	1	
Urinals			Repair Kit				
ECO4 TOTAL:		LPM		LPM	HKS/YK	_	0
Shower Heads							
ECO5 TOTAL:		LPM		LPM	新教教堂中	0	0
9							
Equipment							
Related					***************************************		
ECO6 TOTAL:	The state of the s	in a jedja		अंतर क्ष	1. 医二种 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	0	0

Systems Engineering and Management Corporation, Knoxville, TN

FOCILITY NO. Water Rate:	FACILITY NO. Water Rate:		FY	FY94S EEAP FT. KNOX W	FT. K	M XOI	ER CONSER	ER CONSERVATION STUDY	2 OF 2
Water Rate:	FACILITY NO : Water Rate: 0.42 \$/KL 469			Y)	COLAI	ON NO	KK SHEE! 2		
Annual Water Annual Energy Saving Saving LPY KW KWH MWH Dollar Saving Saving LPY KWH MWH Dollar Saving Saving LPY KWH MWH Dollar Saving Saving LPY KWH MWH Dollar Saving \$50.00	Cas Rate: 10.51 \$/MWH	FACILITY NO.: 469	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
Saving LPY KWH MWH Dollar Saving Saving LPY KWH MWH Dollar Saving \$488.73 \$517.03 \$6.45 \$6.83 \$1,554,900 \$0 \$0 \$47.94 \$47.94 \$47.94 \$7.182 \$1.552.08 \$1.552.08 \$1.554,900 \$0 \$0 \$0 \$0 \$0 \$0 \$0	ECO Number Annual Water Annual Energy ECO Type Saving LPY KW KWH Lavatory Sinks 0 0 0 ECO1 TOTAL: 1,177,673 0 0 Misc. Sinks 1,554,900 0 0 Misc. Sinks 115,520 0 0 Water Closets 115,520 0 0 Urinals 7,182 0 0 ECO3 TOTAL: 7,182 0 0 ECO4 TOTAL: 7,182 0 0 Shower Heads 0 0 0 0 EQUIPMENT 6 Equipment 0 0 0 ECO5 TOTAL: 0 0 0 0 0 0 ECO5 TOTAL: 0 0 0 0 0 0 0 ECO6 TOTAL: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ks ELEC ELEC GAS Dollar Saving ELEC ELCO \$0.00 <th< th=""><th>ECO Type Saving LPY KW KWH L1/17,673 ELEC ELEC ELEC ELEC ELEC ELEC ELEC ELEC</th><th>ECO Number</th><th>Annual Water</th><th></th><th>Energy 5</th><th>saving</th><th>WATER</th><th>Total</th><th>Total</th></th<>	ECO Type Saving LPY KW KWH L1/17,673 ELEC ELEC ELEC ELEC ELEC ELEC ELEC ELEC	ECO Number	Annual Water		Energy 5	saving	WATER	Total	Total
ks 1,177,673 3 \$488.73 \$517.03 1,177,673 0 0 \$0.00 \$0.00 1,177,673 0 0 3 \$488.73 \$517.03 1,177,673 0 3 \$488.73 \$517.03 1,1554,900 0 4 \$6.45 \$6.83 1,554,900 0 4 \$6.45 \$6.83 1,554,900 0 4 \$6.45 \$6.83 1,554,900 0 4 \$6.45 \$6.83 1,554,900 0 4 \$6.45 \$6.83 1,554,900 0 4 \$6.45 \$6.83 1,554,900 0 4 \$6.45 \$6.83 1,554,900 0 \$0.00 \$0.00 \$0.00 1,15,520 \$47.94 \$47.94 \$47.94 1,182 \$2.98 \$2.98 \$2.98 1,182 \$0.00 \$0.00 \$0.00 1,182 \$0.00 \$0.00 \$0.00 1,182 \$0.00 \$0.00 \$0.00 1,182 <t< td=""><td> 1</td><td>ECO Type</td><td></td><td></td><td>ELEC</td><td>GAS</td><td>Dollar Saving</td><td>Dollar Saving</td><td>Dollars Invested</td></t<>	1	ECO Type			ELEC	GAS	Dollar Saving	Dollar Saving	Dollars Invested
ks 0 \$0.00 \$0.00 \$0.00 1,177,673 0 0 3 \$488.73 \$517.03 1,554,900 0 4 \$6.45 \$6.83 1,554,900 0 4 \$6.45 \$6.83 115,520 4 \$6.45 \$6.83 115,520 4 \$47.94 \$47.94 115,520 \$47.94 \$47.94 \$47.94 115,520 \$47.94 \$2.98 \$2.98 7,182 \$2.98 \$2.98 0 0 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00	Lavatory Sinks 0 ECO1 TOTAL: 1,177,673 0 0 Z 1,554,900 0 0 Misc. Sinks 1,554,900 0 0 ECO2 TOTAL: 1,554,900 0 0 Water Closets 115,520 0 0 ECO3 TOTAL: 7,182 0 0 ECO4 TOTAL: 7,182 0 0 Shower Heads 0 0 0 ECO5 TOTAL: 0 0 0 ECO6 TOTAL: 0 0 0 ECO6 TOTAL: 0 0 0 ECO6 TOTAL: 0 0 0	1	19			3	\$488.73	\$517.03	\$2,203.20
1,177,673 0 0 3 \$488.73 \$517.03 1,554,900 0 4 \$6.45 \$6.83 1,554,900 0 0 4 \$6.45 \$6.83 115,520 0 4 \$6.45 \$6.83 115,520 \$47.94 \$47.94 \$47.94 115,520 \$2.98 \$2.98 7,182 \$2.98 \$2.98 7,182 \$2.98 \$2.98 0 \$0.00 \$0.00 ds 0 \$0.00 t \$0.00 \$0.00 t \$0.00 \$0.00	ECO1 TOTAL: 1,177,673 0 0 2 1,554,900 Misc. Sinks ECO2 TOTAL: 1,554,900 0 0 3 115,520 Water Closets ECO3 TOTAL: 1,554,900 0 0 ECO3 TOTAL: 1,554,900 0 0 ECO4 TOTAL: 1,554,900 0 0 ECO4 TOTAL: 1,554,900 0 0 ECO5 TOTAL: 1,554,900 0 0 ECO5 TOTAL: 0 0 0 0 ECO5 TOTAL: 0 0 0 ECO5 TOTAL: 0 0 0 ECO6 TOTAL: 0 0 0 ECO6 TOTAL: 0 0 0	Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
s 1,554,900 4 \$6.45 \$6.83 1,554,900 0 0 4 \$6.45 \$6.83 115,520 0 0 4 \$47.94 \$47.94 115,520 \$47.94 \$47.94 7,182 \$2.98 \$2.98 \$2.98 7,182 \$0.00 \$0.00 \$0.00 t	t 1,554,900	ECO1 TOTAL:	1,177,673	0	0	3	\$488.73	\$517.03	\$2,203.20
1,554,900 0 0 4 \$6.45 \$6.83 115,520 0 4 \$47.94 \$47.94 115,520 \$47.94 \$47.94 7,182 \$2.98 \$2.98 0 0 0 \$0.00 t 0 0 0 \$0.00 \$0.00 \$0.00	ts	2	1,554,900			4	\$6.45	\$6.83	\$19.39
1,554,900 0 4 \$6.45 \$6.83 115,520 \$47.94 \$47.94 115,520 \$47.94 \$47.94 7,182 \$2.98 \$2.98 7,182 \$2.98 \$2.98 0 0 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00	ts	Misc. Sinks							
ts 115,520 \$47.94 \$47.94 \$47.94 115,520 \$47.94 \$2.98 \$2.98 \$2.98 \$2.98 \$2.98 \$0.00 \$0 \$0.00 \$0	ts	ECO2 TOTAL:	1,554,900	0	0	4	\$6.45	\$6.83	\$19.39
tfs	ts	3	115,520				\$47.94	\$47.94	\$480.38
115,520 \$47.94 \$47.94 \$47.94 7,182 \$2.98 \$2.98 7,182 \$0 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 t 0 0 \$0.00 t 0 0 \$0.00 t 0 0 \$0.00 t 0 0 \$0.00	115,520 7,182 0 0 0 0 0 0 0 0 0 0 0 0 0	Water Closets							
7,182 \$2.98 \$2.98 7,182 \$0 \$0.00 ds 0 \$0.00 \$0.00 t 0 0 \$0.00 t 0 0 \$0.00 t 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00	7,182 0 0 0 t 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ECO3 TOTAL:	115,520				\$47.94	\$47.94	\$480.38
7,182 \$2.98 \$2.98 0 \$0.00 \$0.00 ds 0 0 \$0.00 t 0 0 \$0.00 t 0 0 \$0.00 t 0 0 \$0.00	7,182 0 0 0 0 0 0 0 0 0 0 0 0	4	7,182				\$2.98	\$2.98	\$63.65
7,182 \$2.98 \$2.98 \$2.98 0 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 t \$0.00 \$0.00 \$0.00 t 0 \$0.00 \$0.00	ds 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Urinals							
ds 0 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 t 0 0 \$0.00 \$0.00 t 0 0 \$0.00 \$0.00	ds 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ECO4 TOTAL:	7,182				\$2.98	\$2.98	\$63.65
t	0 0 0 0 0 0 CORP	2	0			0	\$0.00	\$0.00	\$0.00
t	0 0 0 0 0 0 CORP	Snower Heads							T T T T T T T T T T T T T T T T T T T
t 0 0 0 0 \$0.00	0 0 0 0 0 CORP	ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
t 0 0 0 \$0.00	0 0 0 0 CORP	9							
00.0\$ 00.00 0 0	0 0 0 0 CORP	Equipment							
00.0\$ 0.00 0 0 0	0 0 0 0 CORP	Related							
00.0\$ 0.00\$ 0 0 0	SYSTEMS CORP								
	SYSTEMS CORP	ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

	FY94S EEAP FT. KNOX W	r KN	X W ER CONSERVATION STUDY	S NO	TUDY		1 2
	CALC	SULAT	ΙŌ			DATE:	29 Oct 94
FACILITY NO. :	485		FUNCTION:	-'	Maintenance	eo	
Occupancy:			Operating Hours:	•	ω		
ECO Number	Existing Fixture System	1 1	Retrofited Fixture System	٤	Usage	Fixtures	Water Leaks
ECO 1ype	Description Dublic Levatory	LPM	Description	LPM /	HRS/YR	Quantity	Eliminated LPY
Lavatory Sinks	ר עטווט במעמוטוץ	t 0	Spillig Loaded Faucets	7.	26	C	
ECO1 TOTAL:		LPM		LPM		5	0
2 Misc. Sinks							
ECO2 TOTAL:		LPF		LPF	#FL/YR		0
3 Water Closets	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	3000	5	
Hatel Closets			Nepall Ni				
ECO3 TOTAL:		LPF		LPF	#FL/YR	5	0
4	Wall Mounted Flush Valve	5.68	Install 1.0 GPF Flush Valve	3.79	18250	2	
Urinais			Repair Kit				
ECO4 TOTAL:		LPM		LPM	HRS/YR	2	0
. 5							
Shower Heads							
ECO5 TOTAL:		LPM		LPM		0	0
9							
Equipment							
Related							
ECO6 TOTAL:	· 秦家公司出版 (1987年) · 李子文 (1987年)					0	0
SYSTEMS CORP		Systen	Systems Engineering and Management Corporation,	nent Co	orporation		Knoxville, TN

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	FY9	FY94S EEAP		XOX MA	MER CONSER	FI. KNOX WATER CONSERVATION STUDY	2 OF 2
		S	ILCULAT	OM NOI	CALCULATION WORK SHEET 2		
FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
)	Gas Rate:	10.51	#WW/\$		Demand Rate:		\$/KW
ECO Number	Annual Water	Annual	Annual Energy	Saving	WATER	Total	Total
ECO Type	Saving LPY	ELEC KW	ELEC	GAS MWH	Dollar Saving	Dollar Saving	Dollars Invested
1	6			17	\$2,769.72	\$2,946.09	\$1,224.00
Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO1 TOTAL:	6,674,025	0	0	17	\$2,769.72	\$2,946.09	\$1,224.00
2	0			0	\$0.00	\$0.00	\$0.00
Misc. Sinks	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
3	27,000				\$23.66	\$23.66	\$300.24
Water Closets	0				\$0.00	\$0.00	\$0.00
	0				\$0.00	\$0.00	\$0.00
ECO3 TOTAL:	57,000				\$23.66	\$23.66	\$300.24
4	68,985				\$28.63	\$28.63	\$127.30
Urinals	0		-		\$0.00	\$0.00	\$0.00
	0				\$0.00	\$0.00	\$0.00
ECO4 TOTAL:	68,985				\$28.63	\$28.63	\$127.30
2	0			0	\$0.00	\$0.00	\$0.00
Shower Heads	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
9	0			0	\$0.00	\$0.00	\$0.00
Equipment	0			0	\$0.00	\$0.00	\$0.00
Related	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

	FY94S FFAP	NX L	FY94S FFAP ET KNOX W	S NO	TI INV		1
	CAL	CULAT	CALCULATION WORK SHEET 1			DATE:	31 Oct 94
FACILITY NO. :	501	1	FUNCTION:	'	Enlisted Barracks	arracks	
Occupancy:	37	1	Operating Hours:	·	15		
ECO Number	Existing Fixture Systen	l – l	Retrofited Fixture System	Е	Usage	Fixtures	Water Leaks
ECO Type	Description	LPM	Description	LPM	HRS/YR	Quantity	Eliminated LPY
-	Public Lavatory	9.5	Spring Loaded Faucets	4.7	730	9	
Lavatory Sinks							
ECO1 TOTAL:		LPM		LPM		9	0
2	Laundry Sink	17	Install Aerators	9.5	2080	-	
Misc. Sinks							
ECO2 TOTAL:		LPF		LPF	#FL/YR	+	0
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	0009	5	
Water Closets			Repair Kit				
- 14 TO TO TO			・ ・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・				
ECOS IOIAL:		רק	77.	LFF	#FLYK	ဌ	0
4	Wall Mounted Flush Valve	2.68	Install 1.0 GPF Flush Valve	3.79	18000	က	
Officials			Repair Kit				
ECO4 TOTAL:		LPM		LPM	HRS/YR	3	0
5							
Shower Heads							
1							
ECUS IDIAL:		LPR		LPM		0	0
9							
Equipment							
Related							
FCO6 TOTAL .						C	C
						>	

Systems Engineering and Management Corporation, Knoxville, TN

Cas Rate: 0.42 \$/KL Energy Rate: 5/KW	Water Rate: 0.42 \$/KL Energy Rate: Gas Rate: 10.51 \$/MWH Demand Rate: Annual Water Saving 1.570,230 Annual Energy Saving 1.570,230 WATER MWH A 1.570,230 Dollar Saving 5.689.37 Dollar Saving 5.689.37 1.570,230 0 4 \$651.65 \$689.37 356,000 0 4 \$651.65 \$689.37 936,000 0 4 \$651.65 \$689.37 936,000 0 4 \$651.65 \$689.37 114,000 2 \$3.88 \$26.37 114,000 2 \$3.88 \$26.37 114,000 3 \$47.31 \$47.31 5 \$42.35 \$42.35 \$42.35 0 0 \$0.00 \$0.00 5 \$0.00 \$0.00 \$0.00 6 \$0.00 \$0.00 \$0.00 8 \$0.00 \$0.00 \$0.00 8 \$0.00 \$0.00 \$0.00 9 \$0.00 \$	Rate: 0.42 \$/KL sate: 10.51 \$/MWH all water Annual Energy	CULATION WORK SHEET 2	
Annual Water Annual Energy Saving WATER Total	Rate: 10.51 \$/MWH ual Water Annual Energy & ELEC ELEC ELEC ELEC ELEC ELEC ELEC EL	kate: 10.51 \$/MWH ual Water Annual Energy ng LPY KW KWH 70,230 0 0 86,000 0 0 14,000 0 0 14,000 0 0 12,060 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		ыкмн
Saving LPY KWH KWH MWH Bollar Saving LPY LST0,230	ual Water Annual Energy ng LPY KW KWH 70,230 0 0 0 70,230 0 0 0 86,000 0 0 0 14,000 0 0 0 2,060 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ual Water Annual Energy ng LPY KW KWH 70,230 0 0 0 0 0 0 14,000 0 0 0 14,000 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		8/KW
ks ELEC ELEC GAS Dollar Saving Company	ng LPY KW KWH 70,230 0 0 0 0 0 36,000 0 0 14,000 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	100 C C C C C C C C C C C C C C C C C C		Total
ks 1,570,230 4 \$651,65 \$689,37 1,570,230 0 4 \$651,65 \$6.00 1,570,230 0 4 \$651,65 \$689,37 3 936,000 2 \$3.88 \$26.37 4 114,000 2 \$3.88 \$26.37 4 114,000 \$47.31 \$47.31 4 102,060 \$47.31 \$47.31 4 102,060 \$42.35 \$42.35 4 \$0.00 \$0.00 \$0.00 5 \$0.00 \$0.00 \$0.00 6 0 \$0.00 \$0.00 6 \$0.00 \$0.00 \$0.00	70,230 0 170,230 0 170,230 0 14,000 0 14,000 0 0 0 0 0 0 0 0 0 0 0 0	70,230 0 0 36,000 14,000 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		Dollars Invested
ks 0 \$0.00 \$0.00 1,570,230 0 4 \$651,65 \$689.37 936,000 0 2 \$3.88 \$26.37 114,000 0 2 \$3.88 \$26.37 ts 114,000 0 2 \$47.31 \$47.31 ts 102,060 \$42.35 \$42.35 \$42.35 ds 0 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 t \$0.00 \$0.00 \$0.00	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	-	\$1,468.80
1,570,230 0 0 4 \$651.65 \$689.37 936,000 0 0 2 \$3.88 \$26.37 114,000 0 0 2 \$3.88 \$26.37 114,000 \$47.31 \$47.31 102,060 \$42.35 \$42.35 0 0 0 0 \$50.00 102,060 \$0.00 102,060 \$0.00 103,060 \$0.00 103,0	36,000 0 0 36,000 0 0 14,000 0 0 2,060 0 0 0 0 0 0 0 0 0 0 0 0 0 0	36,000 36,000 36,000 14,000 0 0 0 0 0 0 0 0 0 0 0 0		\$0.00
\$ 936,000	36,000 36,000 14,000 0 0 0 0 0 0 0 0 0 0 0 0	36,000 36,000 14,000 0 0 0 0 0 0 0 0 0 0 0 0		\$1.468.80
\$ 936,000 0 0 2 \$3.88 \$26.37	36,000 0 0 0 14,000 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	36,000 0 0 14,000 0 0 12,060 0 0 0 0 0 0 0 0		\$9.70
936,000 0 2 \$3.88 \$26.37 114,000 \$47.31 \$47.31 102,060 \$42.35 \$42.35 102,060 \$42.35 \$42.35 0 \$0.00 \$0.00 4s 0 \$0.00 10 \$0.00 \$0.00 10 \$0.00 \$0.00 10 \$0.00 \$0.00 10 \$0.00 \$0.00	36,000 0 0 14,000 0 0 12,060 0 0 0 0 0 0 0 0 0 0 0	36,000 0 0 14,000 0 0 12,060 0 0 0 0 0 0 0 0		
ts 114,000	14,000 14,000 02,060 0 0 0 0 0 0 0	14,000 14,000 12,060 0 0 0 0 0 0 0		\$9.70
ts	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		\$300.24
114,000 \$47.31 \$47.31 102,060 \$42.35 \$42.35 102,060 \$0 \$0.00 ds 0 \$0.00 t 0 \$0.00 t 0 \$0.00 t 0 \$0.00 t 0 \$0.00	14,000 02,060 0 0 0 0 0 0 0	14,000 02,060 0 0 0 0 0 0 0		
102,060 \$42.35 \$42.35 102,060 \$6.00 \$6.00 ds 0 0 \$0.00 t 0 0 \$0.00 t 0 0 \$0.00 t 0 \$0.00 \$0.00	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		\$300.24
102,060 \$42.35 \$42.35 \$42.35	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		\$190.94
102,060 \$42.35 \$42.35 \$42.35 ds	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		
ds	0 0 0	0 0 0		\$190.94
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0 0 0	0 0 0		\$0.00
t	0 0 0	0 0 0		
1	0 0 0	0 0 0		\$0.00
00.0\$ 00.0\$	0 0	0 0		
00 0\$ 00 00 0	0 0	0 0		
				00 00
				90.00

Systems Engineering and Management Corporation, Knoxville, TN

	FY94S EEAP FT. KNOX W	T. KN	DX WER CONSERVATION STUDY	S NOI	TUDY		10:2
	CAL	CULAT	1 = 1			DATE:	31 Oct 94
FACILITY NO. :	502		FUNCTION:	•	Enlisted Barracks	arracks	
Occupancy:	37		Operating Hours:	·	15		
ECO Number	Existing Fixture System		Retrofited Fixture System	٤	Usage	Fixtures	Water Leaks
ECO Type	Description	LPM	Description	L P M	HRS/YR	Quantity	Eliminated LPY
1 Lavatory Sinks	Public Lavatory	9.5	Spring Loaded Faucets	4.7	730	9	
ECO1 TOTAL:		LPM		LPM		9	0
2	Laundry Sink	17	Install Aerators	9.5	2080	1	
Misc. Sinks							
ECO2 TOTAL:		LPF		LPF	#FL/YR	-	0
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	10804	5	
Water Closets			Repair Kit				
ECO3 TOTAL:	・ A Company	LPF		LPF	#FL/YR		0
4	Wall Mounted Flush Valve	5.68	Install 1.0 GPF Flush Valve	3.79	18000	3	
Urinals			Repair Kit				
- V + O + V O - L							
ECO4 101AL:		7 8		7	HKS/YK	2	0
Shower Heads							
FCO5 TOTAL .		MQ -		MG		c	
9				: 		,	
Equipment							
Related							
ECO6 TOTAL:	· · · · · · · · · · · · · · · · · · ·	\$ \frac{1}{2} \fra		Car Nac Wy. Nac Nac Nac Nac Nac Nac Nac Nac Nac Nac		0	0

Systems Engineering and Management Corporation, Knoxville, TN

FACILITY NO.: Wat	Water Rate:	CAI	LCULAT	OM NO	LCULATION WORK SHEET 2		→ 11/14/11
	tor Dote.	(•		,		
	וופו וימוכי	0.42	∜KL		Energy Rate:		#/KWH
	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ECO Number Ar	Annual Water	اها	Energy 5	Saving	WATER	Total	Total
ECO Type Sa	Saving LPY	ELEC KW	ELEC KWH	GAS	Dollar Saving	Dollar Saving	Dollars Invested
	1,570,230	1		4	\$651.65	\$689.37	\$1,468.80
Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
ECO1 TOTAL:	1,570,230	0	0	4	\$651.65	\$689.37	\$1,468.80
2	936,000			2	\$3.88	\$26.37	\$9.70
Misc. Sinks							
ECO2 TOTAL:	936,000	0	0	2	\$3.88	\$26.37	\$9.70
3	205,276				\$85.19	\$85.19	\$300.24
Water Closets							
ECO3 TOTAL:	205,276				\$85.19	\$85.19	\$300.24
4	102,060				\$42.35	\$42.35	\$190.94
Urinals							
ECO4 TOTAL:	102,060				\$42.35	\$42.35	\$190.94
2	0			0	\$0.00	\$0.00	\$0.00
Shower Heads							
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
9							
Equipment							
Related							
ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

	FY94S EEAP FI	KN	F. KNOX WA R CONSERVATION STUDY	SNO	TUDY		1 2
	CAL	SULAT				DATE:	31 Oct 94
FACILITY NO. :	850		FUNCTION:	'	Training Facility	acility	
Occupancy:	1280 Students		Operating Hours:	'	15		
ECO Number	Existing Fixture System		Retrofited Fixture System	٤	Usage	Fixtures	Water Leaks
ECO Type	Description	LPM	Description	LPM	HRS/YR	Quantity	Eliminated LPY
-	Public Lavatory	9.5	Spring Loaded Faucets	4.7	200	8	15800
Lavatory Sinks							
ECO1 TOTAL:		LPM		LPM		8	15800
2							
Misc. Sinks							
ECO2 TOTAL:		LPF		LPF	#FL/YR	0	0
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	1300		
Water Closets			Repair Kit				
ECO3 TOTAL:		LPF		LPF	#FL/YR	7	0
4	Wall Mounted Flush Valve	5.68	Install 1.0 GPF Flush Valve	3.79	46800	5	
Urinals			Repair Kit		A Marine		
ECO4 TOTAL:		LPM		LPM	HRS/YR	r.	0
5							
Shower Heads							
ECO5 TOTAL:		LPM		LPM	1.5	0	0
9							
Equipment							
Related							
ECO6 TOTAL:						0	0

Systems Engineering and Management Corporation, Knoxville, TN

SYSTEMS CORP BAGE 6-69

Saving LPY Annual Water Rate: 5/MVH Demand Rate: \$/MVH Sesyldo Annual Water Annual LPY Annual ELEC ELEC ELEC GAS GAS WATER Total \$/MVH Collar Saving Saving MATER Total \$/MVH \$/MVH Dollar Saving S	FACILITY NO. : Water Rate: 0.42 \$/KL 850 Gas Rate: 10.51 \$/MWH ECO Number Annual Water ECO Type Saving LPY KW KWH 1	Water Rate:		FY	FY94S EEAP FT. KNOX W CALCULATION WC	LCULAT	IOM NOI	CALCULATION WORK SHEET 2	K SHEET 2	2 OF 2
Gas Rate: 10.51 \$\text{MWMH}\$ Demand Rate: \$\text{KW}\$ \$\text{MWTER}\$ Total \$\text{FKW}\$ \$\text{CMMM}\$ \$\text{CMMM}\$ \$\text{CMS}\$ \$\text{CMMM}\$ \$\text{CMS}\$ \$\text{CMS}\$ \$\text{CMS}\$ \$\text{CMS}\$ \$\text{CMS}\$ \$\text{CMMM}\$ \$\text{CMS}\$ \$\text{CMS}\$ \$\text{CMMM}\$ \$\text{CMMM}\$ \$\text{CMMM}\$ \$\text{CMS}\$ \$\text{CMMM}\$ \$\text{CMMMM}\$ \$\text{CMMM}\$ \$\text{CMMMM}\$ \$\text{CMMMM}\$ \$\text{CMMMM}\$ \$\text{CMMMM}\$ \$\text{CMMMM}\$ \$\text{CMMMMMM}\$ \$\text{CMMMMM}\$ \$\text{CMMMMMMMM}\$ \$\text{CMMMMMMMMMMMMMMMM}\$ \$\text{CMMMMMMMMMMMMMMMMM}\$ \$CMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMM	Cool Totals	Columber Annual Water Annual Energy ELEC ELEC	FACILITY NO. :	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
Saving LPY KW KWH MWH Dollar Saving Saving LPY KW KWH MWH S244.60 \$258.76	ECO Type Saving LPY KW KWH 1 589,400 Lavatory Sinks 0 ECO1 TOTAL: 589,400 0 ECO1 TOTAL: 589,400 0 Misc. Sinks 0 0 ECO2 TOTAL: 0 0 Water Closets 34,580 0 ECO2 TOTAL: 34,580 0 Urinals 4 442,260 ECO4 TOTAL: 0 0 ECO4 TOTAL: 0 0 ECO5 TOTAL: 0 0	ECO Number Annual Water Annual Energy ECO Type Saving LPY FUEC ELEC ELEC ELEC ELEC ELEC ELEC ELEC E		Gas Rate:		\$/MWH		Demand Rate:		\$/KW
ks ELEC ELEC GAS ELEC GAS EVAHO GAS EVAHO Dollar Saving Py 8258.76 ks 0 0 \$258.76 589,400 0 0 \$0.00 589,400 0 0 \$0.00 589,400 0 0 \$0.00 5 0 0 \$0.00 5 \$14.35 \$14.35 442,260 0 0 \$183.54 6 0 \$183.54 \$183.54 6 0 \$0.00 \$0.00 6 \$183.54 \$183.54 6 \$0.00 \$0.00	ECO Type Saving LPY RW KW ELEC ELEC ELEC ELEC ELEC ELEC ELEC ELEC	ECO Type Saving LPY KW KWH KWH 589,400 ELEC ELEC ELEC ELEC ELEC EREQUIO Lavatory Sinks 0 0 0 ECO1 TOTAL: 589,400 0 0 ECO1 TOTAL: 0 0 0 Misc. Sinks 0 0 0 BCO2 TOTAL: 0 0 0 ECO3 TOTAL: 34,580 0 0 ECO3 TOTAL: 442,260 0 0 ECO5 TOTAL: 0 0 0 ECO5 TOTAL: 0 0 0 6 Equipment 6 0 0 6 EQUIPMENT 0 0 0 6 ECO6 TOTAL: 0 0 0 6 ECO6 TOTAL: 0 0 0 6 ECO6 TOTAL: 0 0 0 9 0 0 0 0	ECO Number	Annual Water			Saving	WATER	Total	Total
ks 589,400 1 \$244.60 \$258.76 589,400 0 0 1 \$244.60 \$258.76 s 0 0 1 \$244.60 \$258.76 s 0 0 0 \$0.00 \$0.00 ts 34,580 \$14.35 \$14.35 \$14.35 442,260 \$183.54 \$183.54 \$183.54 ds 0 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 t \$0.00 \$0.00 \$0.00	39,400 0 39,400 0 0 0 4,580 12,260 0 0 0 0 0 0 0 0 0 0 0 0 0	39,400 0 0 0 0 0 0 0 0 0 0 0 0	ECO Type			ELEC	GAS	Dollar Saving	Dollar Saving	Dollars Invested
ks 0 0 \$0.00 589,400 0 0 1 \$244.60 5 0 0 0 \$0.00 5 0 0 0 \$0.00 6 34,580 0 0 \$14.35 6 442,260 \$183.54 6 0 0 0 \$50.00 6 \$183.54 7 1 \$244.60 8 14.35 8 14.35 9 1 \$0.00 9 1 \$244.60 9 \$0.00 9 \$0.00 1 \$183.54 9 0 \$0.00 1 \$183.54 9 0 \$0.00 1 \$0.00	0 0 0 0 0 4,580 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 4,580 0 0 0 12,260 0 0 0 0 0 0 0 0 0 0 0	-	589,400			-	\$244.60	\$258.76	\$1,958.40
589,400 0 0 1 \$244.60 0 0 0 \$0.00 34,580 0 0 \$14.35 442,260 \$183.54 0 0 0 0 \$0.00 442,260 \$183.54 0 \$0.00	39,400 0 0 0 0 0 4,580 0 0 12,260 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	39,400 0 0 0 0 0 4,580 0 0 12,260 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
ts	0 0 0 4,580 4,580 12,260 0 0 0 0 0 0	0 0 0 0 4,580 4,580 0 0 0 0 0 0 0		589,400	0	0	-	\$244.60	\$258.76	\$1,958.40
ts 34,580 0 0 0 \$50.00 34,580 0 0 0 \$14.35 34,580 \$14.35 442,260 \$183.54 0 0 0 0 \$0.00 t	0 0 0 4,580 0 0 4,580 0 0 12,260 0 0 0 0 0 0 0 0 0 0 0 0 0 0	4,580 4,580 4,580 12,260 0 0 0 0 0 0 0 0 0	2	0			0	\$0.00	\$0.00	\$0.00
ts 34,580 0 0 0 \$0.00 34,580 \$14.35 442,260 \$183.54 442,260 \$183.54 0 0 0 0 \$0.00 t	0 0 0 4,580 0 0 4,580 0 0 12,260 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 4,580 0 0 4,580 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Misc. Sinks							
442,260 \$183.54 442,260 \$183.54 0 \$0 \$0.00 ds 0 \$0.00 t \$0.00 \$0.00	4,580 4,580 12,260 0 0 0 0 0 0 0	4,580 4,580 12,260 0 0 0 0 0 0	ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
442,260 \$183.54 442,260 \$183.54 442,260 \$183.54 0 \$0.00 ds 0 \$0.00 t 0 \$0.00 t 0 \$0.00 t 0 \$0.00	4,580 12,260 0 0 0 0 0 0 0	4,580 12,260 0 0 0 0 0 0 0	3	34,580				\$14.35	\$14.35	\$420.34
34,580 \$14.35 442,260 \$183.54 442,260 \$0 0 \$0.00 ds 0 \$0.00 t 0 \$0.00 t 0 \$0.00	4,580 12,260 0 0 0 0 0 0 0 0 0	4,580 12,260 0 0 0 0 0 0 0 0	Water Closets							
442,260 \$183.54 442,260 \$183.54 0 \$0.00 ds 0 \$0.00 t 0 \$0.00 t 0 \$0.00	12,260 0 0 0 0 0 0 0 0 0	12,260 0 0 0 0 0 0 0	ECO3 TOTAL:	34,580				\$14.35	\$14.35	\$420.34
442,260 \$183.54 0 \$0.00 ds 0 \$0.00 0 0 \$0.00 t t	12,260 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	4	442,260				\$183.54	\$183.54	\$318.24
442,260 \$183.54 0 \$0.00 ds 0 \$0.00 t 0 \$0.00	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Urinals							
ids 0 0 \$0.00 11	0 0 0	0 0 0	ECO4 TOTAL:	442,260				\$183.54	\$183.54	\$318.24
ids	0 0 0	0 0 0	2	0			0	\$0.00	\$0.00	\$0.00
: 0 0 0 \$0.00	0 0 0 0	0 0	Shower Heads							
	0 0 0	0 0 0	ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
Equipment	0 0 0	0 0	9							
	0 0 0	0 0 0	Equipment							
Related	0 0 0	0 0	Related							
	0 0	0 0 0		•	,					
00.0\$ 0 0 0 0			ECO6 IOIAL:	0	0			\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

	FY94S EEAP FT. KNOX W	T. KN	DX W ER CONSERVATION STUDY	S NO	TUDY		-2
	CAL	CULAT				DATE:	29 Oct 94
FACILITY NO.:	851		FUNCTION:		Hospital/Dining	ining	
Occupancy:	3 Meals / Day		Operating Hours:	,	24		
ECO Number	Existing Fixture System		Retrofited Fixture System	ш	Usage	Fixtures	Water Leaks
ECO Type	Description	LPM	Description	LPM	HRS/YR	Quantity	Eliminated LPY
1 Systom Cinks	Lavatory Faucets	9.5	Spring Loaded Faucets	4.7	1095	5	
Lavatoly Jilins							
ECO1 TOTAL:		LPM	1、1、1、1、1、1、1、1、1、1、1、1、1、1、1、1、1、1、1、	LPM		5	0
2	Service Sink	22.7	Install Aerators	9.6	1095	2	
Misc. Sinks							
ECO2 TOTAL:		LPF		LPF	#FL/YR	2	0
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	10950	7	
Water Closets			Repair Kit				
- A HOH COOL		-					
ECUS IOIAL:		1 1		LH	#FLYK	,	0
4	Wall Mounted Flush Valve	9.68	Install 1.0 GPF Flush Valve	3.79	10950	-	
Urinals			Repair Kit				
ECO4 TOTAL:		LPM		Md I	HRS/YR	-	c
5							
Shower Heads							
ECO5 TOTAL:		LPM		LPM		0	0
9	2 Comp. Sink (2 faucets)	17	Install Aerators	9.5	2190	2	
Equipment	1 Comp. Sink (1 faucets)	22.7	Install Aerators	9.5	2190	2	
Related							
ECO6 TOTAL:				577 22 13		4	0

Systems Engineering and Management Corporation, Knoxville, TN

FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
-	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ECO Number	Annual Water	Annual	Energy 5	Saving	WATER	Total	Total
ECO Type	Saving LPY	ELEC KW	ELEC	GAS MWH	Dollar Saving	Dollar Saving	Dollars Invested
•	1,962,788			3	\$814.56	\$846.39	\$1,224.00
Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO1 TOTAL:	1,962,788	0	0	3	\$814.56	\$846.39	\$1,224.00
2	1,734,480			4	\$7.20	\$48.87	\$19.39
Misc. Sinks	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO2 TOTAL:	1,734,480	0	0	4	\$7.20	\$48.87	\$19.39
3	291,270				\$120.88	\$120.88	\$420.34
Water Closets	0				\$0.00	\$0.00	\$0.00
	0				\$0.00	\$0.00	\$0.00
ECO3 TOTAL:	291,270				\$120.88	\$120.88	\$420.34
4	20,696				\$8.59	\$8.59	\$63.65
Urinals	0				\$0.00	\$0.00	\$0.00
	0				\$0.00	\$0.00	\$0.00
ECO4 TOTAL:	20,696				\$8.59	\$8.59	\$63.65
2	0			0	\$0.00	\$0.00	\$0.00
Shower Heads	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
9	1,971,000			3	\$8.18	\$40.14	\$9.70
Equipment	3,468,960			2	\$14.40	\$70.65	\$19.39
Related	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	00.0\$
	0			0	\$0.00	\$0.00	\$0.00
ECO6 TOTAL:	5,439,960	0	0	8	\$22.58	\$110.79	\$29.09

Systems Engineering and Management Corporation, Knoxville, TN

	FY94S EEAP F	T. KN	FY94S EEAP FT. KNOX WER CONSERVATION STUDY	ON S	ruby		10.2
	CAL	CULAT	CALCULATION WORK SHEET 1			DATE:	31 Oct 94
FACILITY NO.:	853		FUNCTION:		Enlisted Barracks	arracks	
Occupancy:	140		Operating Hours:	1	15		
ECO Number	Existing Fixture Systen		Retrofited Fixture System	٦	Usage	Fixtures	Water Leaks
ECO Type	Description	LPM	Description	LPM	HRS/YR	Quantity	Eliminated LPY
	Public Lavatory	9.2	Spring Loaded Faucets	4.7	730	25	
Lavatory Sinks							
ECO1 TOTAL:		LPM		LPM		25	0
2	Laundry Sink	23	Install Aerators	9.5	2080	3	
Misc. Sinks							
ECO2 TOTAL:		LPF		LPF	#FL/YR	3	0
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	0009	25	
Water Closets			Repair Kit				
FCO3 TOTAL .		1 05		10 10 10	#EI /VD		C
		1			10007	3,	
4 Urinals	Wall Mounted Flush Valve	2.08	Install 1.0 GPF Flush Valve Repair Kit	3./9	1362/	15	
ECO4 101AL:		LPB		LPM	HRS/YR	15	0
Shower Heads							
FCOS TOTAL .		Md		W C		c	
9				: :		,	
Equipment							
Related							
ECO6 TOTAL:						0	0

Systems Engineering and Management Corporation, Knoxville, TN

FACILITY NO.: Wa	Water Rate:	0.4.0	₩.		- 1/1 0		\$ 11.7 A 11 1
		0.42	J (A)		cnergy Kate:		#/KVVH
Ga	Gas Rate:	10.51	#WW/\$		Demand Rate:		\$/KW
ECO Number A	Annual Water	Annual	Energy S	Saving	WATER	Total	Total
ECO Type S	Saving LPY	ELEC	ELEC KWH	GAS MWH	Dollar Saving	Dollar Saving	Dollars invested
-	6,542,625			15	\$2,715.19	\$2,872.37	\$6,120.00
Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
ECO1 TOTAL:	6,542,625	0	0	15	\$2,715.19	\$2,872.37	\$6,120.00
2	5,054,400			12	\$20.98	\$142.40	\$29.09
Misc. Sinks							
ECO2 TOTAL:	5,054,400	0	0	12	\$20.98	\$142.40	\$29.09
3	270,000				\$236.55	\$236.55	\$1,501.20
Water Closets							
ECO3 TOTAL:	570,000				\$236.55	\$236.55	\$1,501.20
4	386,325				\$160.33	\$160.33	\$954.72
Urinals							
ECO4 TOTAL:	386,325				\$160.33	\$160.33	\$954.72
2	0			0	\$0.00	\$0.00	\$0.00
Shower Heads							
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
6 Equipment							
Related							
ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

	FY94S EEAP F	Ĭ. KN	FY94S EEAP FT. KNOX WER CONSERVATION STUDY	S NO	ruby		1 2
	CAL	CULAT	CALCULATION WORK SHEET 1			DATE:	31 Oct 94
FACILITY NO.:	855	1	FUNCTION:	-,	Officer (trans.)	ins.)	
Occupancy:	24	1	Operating Hours:	'	15		
ECO Number	Existing Fixture System		Retrofited Fixture System	٤	Usage	Fixtures	Water Leaks
ECO Type	Description	LPM	Description	LPM	HRS/YR	Quantity	Eliminated LPY
1 Lavatory Sinks	Public Lavatory	17	Spring Loaded Faucets	4.7	130	16	
ECO1 TOTAL:		LPM		LPM		16	0
Misc Sinks							
ECO2 TOTAL:		LPF		LPF	#FL/YR	0	0
3	Tank Type	11.4	Install 1.6 GPF Tank Type	9	1825	16	
Water Closets			Water Closet				
FCC3 TOTAL .		1 0 0		-	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	70	c
		- -					
4 Urinals							
ECO4 TOTAL:		LPM		LPM	HRS/YR	0	0
2							
Shower Heads							
ECO5 TOTAL:		LPM		LPM		0	0
9							
Equipment							
Related							
ECO6 TOTAL:						0	0

Systems Engineering and Management Corporation, Knoxville, TN

## \$\frac{\pi}{\pi}\$ \text{FKW} \\ ## Dollar Saving \$\frac{\pi}{\pi}\$ \text{SN.00} \\ ## \$\frac{\pi}{\pi}\$ \text{SO.00} \\ ## \$\frac{\pi}{\pi}\$ \text{SO.00} \\ ## \$\frac{\pi}{\pi}\$ \\ ## \$\frac{\pi}{	Water Rate: 0.42 \$/KL	Mater Rate: 0.42 \$/K/L Energy Rate: \$/K/WH Energy Rate: \$/K/WH ELEC \$60.00 \$738.30 \$738.30 \$70.00 \$60.			CALCULATION WC	LCULAT	ION WO	CALCULATION WORK SHEET 2	K SHEET 2	2 01 2
Annual Water Annual Energy Saving WATER Total ELEC EL	Cas Rate: 10.51 \$/MWH	Cas Rate: 10.51 \$/MWH	FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
Saving LPY KWH MWH Dollar Saving FLEC GAS Saving LPY KWH MWH MWH Dollar Saving \$5000 \$738.30 \$738.30 \$700 \$7000	er Annual Water Annual Energy KW KWH 1,681,680 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Saving LPY KW KWH KWH 1,681,680 0 0 0 0 0 0 0 0 0)	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
saving LPY ELEC ELEC GAS (GAS) GAS (GAS) COLIAR Saving (GAS) COLIAR	Saving LPY KW KWH 1,681,680 0 0 0 0 0 0 0 0 0	Saving LPY KW KWH 1,681,680 1,681,680 1,681,680 0 0 157,680 0 0 0 0 0 ds t t CORP	ECO Number	Annual Water	Annual		Saving	WATER	Total	Total
1,681,680	1,681,680 1,681,680 0 0 0 157,680 0 0 0 0 0 0 0 0 0 0 0 0 0	1,681,680 1,681,680 0 0 0 157,680 0 0 0 0 0 0 0 0 0 0 0 0 0	ECO Type		ELEC	ELEC KWH	GAS MWH	Dollar Saving	Dollar Saving	Dollars Invested
1,681,680 0 \$0.00 \$0.00 50 \$0.00 \$0.00 \$0.00 50 0 4 \$697.90 \$738.30 5 0 0 0 \$0.00 \$0.00 5 0 0 0 \$0.00 \$0.00 4 157,680 \$65.44 \$65.44 \$65.44 6 0 0 \$0.00 \$0.00 6 0 \$0.00 \$0.00 \$0.00 6 \$0.00 \$0.00 \$0.00 7 \$0.00 \$0.00 \$0.00 8 \$0.00 \$0.00 \$0.00 8 \$0.00 \$0.00 \$0.00	1,681,680	1,681,680 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		1,681,680			4	\$697.90	\$738.30	\$3,916.80
1,681,680 0 0 4 \$697.90 \$738.30	1,681,680 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1,681,680 0 0 0 0 157,680 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
s	trs	to 0 0 0 0 157,680 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ECO1 TOTAL:	1,681,680	0	0	4	\$697.90	\$738.30	\$3.916.80
ts	s 0 0 0 0 0 157,680 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	s	2	0			0	\$0.00	\$0.00	\$0.00
ts	ts	ts	Misc. Sinks						The state of the s	
ts	ts	ts	ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
167,680 \$65.44 \$65.44 \$65.44 \$65.44 \$0.00	ds 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	tt 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	က	157,680				\$65.44	\$65.44	\$6,706.56
157,680 \$65.44 \$65.44 0 \$0.00 \$0.00 \$0.00 ds 0 0 0 \$0.00 \$0.00 t 0 0 0 \$0.00 \$0.00 t 0 0 0 \$0.00 \$0.00	ds 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ds 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Water Closets							
0	ds 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ds 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ECO3 TOTAL:	157,680				\$65.44	\$65.44	\$6,706.56
ds	ds 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ds 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	4	0				\$0.00	\$0.00	\$0.00
ds 0 0 0 \$0.00 \$0.00 \$0.00	ds 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ds 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Urinals							
ds 0 \$0.00 \$0.00 ds 0 0 \$0.00 t 0 0 \$0.00 \$0.00 t 0 0 \$0.00 \$0.00	ds 0 0 0 0 tr	ds 0 0 0 0 t	ECO4 TOTAL:	0				\$0.00	\$0.00	\$0.00
t t 0 0 0 0 \$0.00 0 0 0 \$0.00	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	5	0			0	\$0.00	\$0.00	\$0.00
t \$0.00 \$0.00 \$0.00 \$0.00 t	0 0 0 0 0 0 CORP	0 0 0 0 0 0 CORP	Shower Heads							
t	corp	CORP	ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
00 0 0 \$0.00	0 0 0	0 0 0	9							
00.00\$ 0 0 0 0	0 0 0	0 0	Equipment							
00.00\$ 0 0 0 0 0	0 0 0	0 0 0	Related							
00.0\$ 0.00\$ 0 0 0	0 0 0	0								
			ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

	FY94S EEAP F	I. KNC	FY94S EEAP FT. KNOX WALER CONSERVATION STUDY	S NOI	TUDY		1 2
	CAL	CULATI	CULATION WORK SHEET 1			DATE:	31 Oct 94
FACILITY NO. :	888		FUNCTION:	- (Church		
Occupancy:			Operating Hours:	'			
ECO Number	Existing Fixture System	_	Retrofited Fixture System	ш	Usage	Fixtures	Water Leaks
ECO Type	Description	LPM	Description	LPM	HRS/YR	Quantity	Eliminated LPY
1	Public Lavatory	17	Spring Loaded Faucets	4.7	26	1	
Lavatory Sinks	Public Lavatory	9.5	Spring Loaded Faucets	4.7	26	-	
							Č
ECO1 TOTAL:		L D D		LPM		7	0
2							
Misc. Sinks							
ECO2 TOTAL:		LPF		LPF	#FL/YR	0	0
3	Tank Type (public)	11.4	Install 1.6 GPF Tank Type	9	1300	1	
Water Closets			Water Closet				
. IATOT		10		100	#CI \\D	7	c
ECO3 IOIAL.						-	
4 Urinals							
ECO4 TOTAL:		LPM		ILPM	HRS/YR	0	0
2							
Shower Heads							
ECO5 TOTAL:		LPM		LPM		0	0

Systems Engineering and Management Corporation, Knoxville, TN

SYSTEMS CORP

Equipment Related

ECO6 TOTAL:

FACILITY NO: Water Rate: 0.42 \$/K/L Energy Rate: \$/K/VH 888 Gas Rate: 10.51 \$/M/VH Demand Rate: \$/K/VH ECO Number Annual Water Annual Energy \$/K/VH Total Total ECO Type Saving LPY KWH KWH MAN Dollar Saving Dollar Saving Lavatory Sinks 21,021 KWH KWH MAN \$8.73 \$56,020 \$244.80 ECOT TOTAL: 30,342 0 0 7 \$12,59 \$85,49 \$244.80 ECOZ TOTAL: 0 0 0 0 \$0.00 \$0.00 \$0.00 Misc. Sinks 7 \$12,59 \$85,48 \$2.91 \$418.84 Water Closets 7 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 ECOZ TOTAL: 7 \$2.91 \$2.91 \$418.84 \$0.00 ECOZ TOTAL: 0 0 \$0.00 \$0.00 \$0.00 \$0.00 Shower Hea		FYE	FY94S EEAP FT. KNOX W	P FT. KI	M XON	ER CONSER	FER CONSERVATION STUDY	2 OF 2
ODO Gas Rate: 10.51 \$NMVH Demand Rate: \$TOtal \$TO	FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
O Number Annual Water Annual Energy Saving ELEC CAS CAS Total Solution Total Solution	000	Gas Rate:		\$/MWH		Demand Rate:		\$/KW
OType Saving LPY KWH KWH KWH MWH Dollar Saving B8 72 Dollar Saving \$55.22 1 21 021 21 021 5 88.72 \$56.26 1 21 021 2 30.342 0 7 \$12.59 \$85.49 1 OTAL: 30,342 0 0 \$0.00 \$0.00 1 OTAL: 0 0 0 \$0.00 \$0.00 1 OTAL: 0 0 \$0.00 \$0.00 \$0.00 1 OTAL: 0 0 \$0.00 \$0.00 \$0.00 \$0.00 1 OTAL: 0 0 \$0.00 \$0.00 \$0.00 \$0.00 1 OTAL: 0 0 \$0.00 \$0.00 \$0.00 \$0.00 1 OTAL: 0 0 0 \$0.0	ECO Number	Annual Water	जि		Saving	WATER	Total	Total
tory Sinks 9,321 5 \$8.72 \$59.22 TOTAL: 30,342 0 0 7 \$12.59 \$85.49 TOTAL: 0 0 0 0 \$0.00 \$0.00 TOTAL: 0 0 \$0.00 \$0.00 \$0.00 \$0.00 TOTAL: 0 0 \$0.00 \$0.00 \$0.00 TOTAL: 0 0 \$0.00 \$0.00 \$0.00 \$0.00 TOTAL: 0 0 \$0.00 \$0.00 \$0.00 TOTAL: 0 0 \$0.00 \$0.00 \$0.00 \$0.00 TOTAL: 0 0 \$0.00 \$0.00 \$0.00 TOTAL: 0 0 0 0 0 \$0.00 \$0.00 TOTAL: 0 0 0 0 \$0.00 \$0.00 TOTAL: 0 0 0 0 0 \$0.00 \$0.00 TOTAL: 0 0 0 0 0 0 \$0.00 \$0.00 TOTAL: 0 0 0 0 0 0 \$0.00 \$0.00 TOTAL: 0 0 0 0 0 0 \$0.00 \$0.00 TOTAL: 0 0 0 0 0 0 \$0.00 \$0.00 TOTAL: 0 0 0 0 0 0 \$0.00 \$0.00 TOTAL: 0 0 0 0 0 0 0 \$0.00 TOTAL: 0 0 0 0 0 0 0 \$0.00 TOTAL: 0 0 0 0 0 0 0 0 \$0.00 TOTAL: 0 0 0 0 0 0 0 0 0 \$0.00 TOTAL: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ECO Type		ELEC KW	ELEC KWH	GAS	Dollar Saving	Dollar Saving	 Dollars Invested
tory Sinks 9,321 2 \$3.87 \$26.26 TOTAL: 30,342 0 0 7 \$12.59 \$85.49 2 0 0 0 50.00 \$0.00 sc. Sinks 0 0 0 \$0.00 \$0.00 sc. Sinks 0 0 0 \$0.00 \$0.00 TOTAL: 7,020 \$0.00 \$2.91 \$2.91 TOTAL: 7,020 \$0.00 \$0.00 \$0.00 Initials 50.00 \$0.00 \$0.00 Formula \$0.00 \$0.00 \$0.00	1	21,021			5	\$8.72	\$59.22	\$244.80
TOTAL: 30,342 0 0 7 \$12.59 \$85.49 2 0 0 50.00 \$0.00 sc. Sinks 0 0 0 \$0.00 TOTAL: 0 0 \$0.00 \$0.00 TOTAL: 7,020 \$2.91 \$2.91 TOTAL: 7,020 \$0.00 \$0.00 Irinals \$0.00 \$0.00 \$0.00 F 0 \$0.00 \$0.00 Sound \$0.00 \$0.00 F 0 \$0.00 TOTAL: 0 \$0.00 F 0 \$0.00 Sound \$0.00 Sound \$0.00 F 0 \$0.00 Sound \$0.00 F 0 \$0.00 Sound \$0.00 Sound \$0.00 Sound \$0.00 Sound \$0.00 Sound \$0.00 Sound	Lavatory Sinks	9,321			2	\$3.87	\$26.26	\$244.80
2 0 \$0.00 \$0.00 sc. Sinks 0 0 \$0.00 \$0.00 TOTAL: 0 0 \$0.00 \$0.00 TOTAL: 7,020 \$2.91 \$2.91 TOTAL: 7,020 \$0.00 \$0.00 Vinals 0 \$0.00 \$0.00 Fear 0 \$0.00 \$0.00 Wer Heads 0 \$0.00 \$0.00 VOTAL: 0 \$0.00 \$0.00 General \$0.00 \$0.00 \$0.00 General \$0.00 \$0.00 \$0.00 TOTAL: 0 0 \$0.00 \$0.00 General 0 \$0.00 \$0.00 \$0.00 General 0 \$0.00 \$0.00 \$0.00 TOTAL: 0 0 0 \$0.00 Sould \$0.00 \$0.00 \$0.00	ECO1 TOTAL:	30.342	0	0	7	\$12.59	\$85.49	\$489.60
5	2	0			0	\$0.00	\$0.00	\$0.00
ts 7,020 0 0 0 \$0.00 \$0.00 \$2.91 \$	Misc. Sinks							
ts 7,020 \$2.91 \$2.91 \$2.91 \$2.91 \$2.91 \$2.91 \$0 \$0 \$0 \$0 \$0 \$0.00	ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
ts 7,020 \$2.91 \$2.91 \$2.91 \$0.00 \$0.	3	7,020				\$2.91	\$2.91	\$418.84
7,020 \$2.91 \$2.91 0 \$0.00 \$0.00 ds 0 \$0.00 t 0 \$0.00	Water Closets							
0 \$0.00 \$0.00 \$0.00 \$0.00	ECO3 TOTAL:	7.020				\$2.91	\$2.91	\$418 84
ds	4	0				\$0.00	\$0.00	\$0.00
ds 0 0 0 \$0.00 \$0.00 \$0.00	Urinals							
ds	ECO4 TOTAL:	0				\$0.00	\$0.00	\$0.00
ds 0 0 0 \$0.00 \$0.00 t	5	0			0	\$0.00	\$0.00	\$0.00
t	Shower Heads							
t 0 0 0 \$0.00	ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
00.0\$ 00.00 0 0	9							
00.0\$ 0 0 0 0	Equipment Polotod							
00.0\$ 0 0 0 0	Neigheu							
00.0\$ 0.00 \$0.00								
	ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

	FY94S EEAP FT		. KNOX WA CONSERVATION STUDY	S NOI	TUDY		1 2
	CALC	ULAT	CALCULATION WORK SHEET 1			DATE:	31 Oct 94
FACILITY NO. :	1002		FUNCTION:		Dental Clinic	jic Jic	
Occupancy:	The state of the s		Operating Hours:		80		
ECO Number	Existing Fixture System	P D	Retrofited Fixture System	m PM	Usage	Fixtures	Water Leaks
1		15	Spring Loaded Faucets	4.7	130	30	Emmaled Lr
Lavatory Sinks	Public Lavatory Handwash Lavatory	9.5	Spring Loaded Faucets Spring Loaded Faucets	7.4	130 365	2 2	
ECO1 TOTAL:		LPM		LPM		37	0
2 Misc. Sinks							
ECO2 TOTAL:		LPF		LPF	#FL/YR	0	0
က	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	2200	19	
Water Closets			Repair Kit				
	Tank Type (public)	11.4	Install 1.6 GPF Tank Type	9	1300	2	
ECO3 TOTAL:		LPF		LPF	#FL/YR	21	0
4	Wall Mounted Flush Valve	5.68	Install 1.0 GPF Flush Valve	3.79	1300		
Urinals			Repair Kit				
ECO4 TOTAL:		LPM		LPM	HRS/YR	7	0
5							
Shower Heads							
ECO5 TOTAL:		LPM		LPM		C	C
9							
Equipment							
Related							
							*
ECO6 TOTAL:				A.A.A.A.A.A.A.A.A.A.A.A.A.A.A.A.A.A.A.		0	0
-							

Systems Engineering and Management Corporation, Knoxville, TN

FACILITY NO. Water Rate: 0.42 S/KL Firegy Rate: 10.51 S/MVH Demand Rate: S/KVH S	Water Rate: 0.42 \$/KL Gas Rate: 10.51 \$/MWH r Annual Water Annual Energy Saving LPY KW KWH Saving LPY KW KWH 2,685,150 0 0 0 s 23,025 0 0 158,840 0 0 0 s 14,040 0 0 17,199 0 0 0 s 17,199 0 0 ls 0 0 0 0 0 0 0 c 0 0 0			CALCULATION WO	LCULAT		LCULATION WORK SHEET 2	RK SHEET 2	2 OF 2
CORP	Cas Rate: 10.51 \$/MWH	FACILITY NO.:	Water Rate:		\$/KL		Energy Rate:		\$/KWH
Saving LPY KW KWH Saving LPY KW KWH ELEC EL	Saving LPY KW KWH Saving LPY KW KWH Saving LPY KW KWH 2,685,150 0 0 0 0 0 0 0 0 0	N 0 0 0	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
Saving LPY KW KWH 2,685,150 2,685,150 2,685,150 2,3,025 3,420,780 0 0 158,840 172,880 172,880 0 0 177,199 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Saving LPY KW KWH 2,685,150 2,685,150 2,33,025 3,420,780 0 0 158,840 172,880 172,880 0 0 177,199 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ECO Number	Annual Water	læl		Saving	WATER	Total	Total
14s 233,025	ts 2,685,150	ECO Type		ELEC KW	ELEC	GAS	Dollar Saving	Dollar Saving	Dollars Invested
ks 233,025 502,605 3,420,780 0 0 0 0 0 0 158,840 0 0 172,880 0 0 172,880 0 0 17,199 0 0 ds 0 0 0 0	Ks 233,025 Ks 502,605 Color Color	_	1			9	\$1,114.34	\$1,178.84	\$7,344.00
s	502,605 3,420,780 0 0 0 158,840 172,880 17,199 0 ds 17,199 0 ds 0 0 ds 0 0 0 ds 0 0 0 0 0 0 0 0 0 0 0 0 0	Lavatory Sinks	233,025			-	\$96.71	\$102.30	\$1,224.00
s 0 0 0 0 0 158,840 172,880 177,199 0 ds 0 0 0 ds 0 0 0 0 ds 0 0 0 0 0 0 0	3,420,780 0 0 0 0 0 158,840 0 0 0 0 0 172,880 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		502,605			-	\$208.58	\$220.66	\$489.60
s 0 0 0 0 158,840 0 0 0 0 0 0 172,880 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ts 14,040 0 0 0 172,880 0 0 172,880 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ECO1 TOTAL:	3,420,780	0	0	8	\$1,419.62	\$1,501.80	\$9,057.60
s 0 0 0 0 0 14,040 172,880 0 17,199 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	s 0 0 0 0 0 158,840 172,880 177,199 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2	0			0	\$0.00	\$0.00	\$0.00
t 158,840 0 0 0 0 172,880 17,199 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	t 158,840 0 0 0 0 14,040 17,199 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Misc. Sinks							
ts 158,840	ts 14,040	ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
ds 14,040	t 14,040 172,880 17,199 0 0 0 0 0 0 0 0 0 0 0 0 0	3	158,840				\$65.92	\$65.92	\$1,140.91
14,040 172,880 17,199 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	t 14,040	Water Closets							
172,880 17,199 0 0 0 0 0 0 0 0 0 0 0 0 0 0	172,880 17,199 0 0 0 0 0 0 0 0 0 0 0 0 0		14,040				\$5.83	\$5.83	\$838.32
7,199 0 0 0 0 0 0 0	7,199 0 0 0 0 0 0 0	ECO3 TOTAL:	172,880				\$71.75	\$71.75	\$1,979.23
7,199 0 0 0 0 0 0	7,199 0 0 0 0 0 0 0	4	17,199				\$7.14	\$7.14	\$445.54
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Urinals							
0 0 0	0 0 0	ECO4 TOTAL:	17,199				\$7.14	\$7.14	\$445.54
0 0 0	0 0 0	2	0			0	\$0.00	\$0.00	\$0.00
0 0 0	0 0 0 0	Shower Heads							
0 0 0	0 0 0	ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
0 0	0 0 0	9							
0 0	0 0	Equipment							
0 0	0 0	Related							
0	0								
		ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
		SYSTEMS C	ORP			Systems	Engineering and	Management Cor	poration, Knoxville.
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Systems Engineering and Management Corporation, Knoxville, TN

	FY94S EEAP FT. I	KNOX WA ER CONSERVATION STUDY	ION STUDY		1 2
	CALCU	CALCULATION WORK SHEET 1		DATE:	31 Oct 94
FACILITY NO.:	1017	FUNCTION:	Training	Ď	
Occupancy:	The second secon	Operating Hours:	8	1	
ECO Number	Existing Fixture System Description	Retrofited Fixture System Description	n Usage	ye Fixtures YR Quantity	Water Leaks Eliminated LPY
1 Lavatory Sinks	ý	Sprin			
ECO1 TOTAL:			LPM	2	15800
2 Misc. Sinks					
ECO2 TOTAL:		IPE	LPF #FL/YR	YR 0	0
3 Water Closets	Floor Mounted Flush Valve 17	7 Install 3.5 GPF Flush Valve Repair Kit	13.2 10000	00 2	
ECO3 TOTAL:		DE	LPF #FL/YR	YR 2	0
4 Urinals					
ECO4 TOTAL:		LPM	LPM HRS/YR	YR 0	0
Shower Heads					
ECO5 TOTAL:		LPM	ГРМ	0	0
Equipment Related					
ECO6 TOTAL:				0	0

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FACILITY NO.: Water Rate: 0.42 \$KL Energy Rate: \$KWH 1017 Gas Rate: 10.51 \$IMWH Demand Rate: \$KWW ECO Number Annual Water ELEC GLS GAS WATER Total Total ECO Type Saving LPY KWH MWH Dollar Saving Dollar Saving Dollar Saving Dollar Saving Dollar Saving Dollar Saving \$48960 ECO TYPE Saving LPX KWH MWH Dollar Saving Dollar Saving \$4000 ECOT TOTAL: 0 0 0 0 \$50.00 \$50.00 \$50.00 Misc. Sinks 0 0 0 0 \$50.00 \$50.00 \$50.00 Water Closetts 76,000 0 0 \$50.00 \$50.00 \$50.00 ECO2 TOTAL: 0 0 \$50.00 \$50.00 \$50.00 \$50.00 ECO3 TOTAL: 0 0 0 \$50.00 \$50.00 \$50.00	Gas Rate: 0.42 \$/KI Energy Rate: Gas Rate: 10.51 \$/MWH Demand Rate: Annual Water Annual Energy Saving WATER Saving LPY KW KWH MWH Dollar Saving 194,810 0 0 \$0.00 194,810 0 0 \$0.00 76,000 0 0 \$0.00 76,000 0 \$0.00 76,000 0 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00		CAI	CAI	LCULATION WO	OM NOI	LCULATION WORK SHEET 2	< SHEET 2	
Cas Rate: 10.51 \$MWH Demand Rate: S/KW Annual Energy Saving WATER Total ELEC GAS S80.85 S80.50 S0.00	Cas Rate: 10.51 \$/MWH Demand Rate: Annual Water Annual Energy Saving ELEC ELEC ELEC GAS CAS WATER MATER Saving LPY KW KWH MWH NWH MWH Dollar Saving 0 0 0 0 0 \$0.00 \$0.00 194,810 0 0 0 0 \$0.00 \$0.00 76,000 0 0 0 \$0.00 \$0.00 76,000 \$0.00 \$0.00 0 0 0 0 \$0.00 \$0.00 0 0 0 \$0.00 \$0.00 0 0 0 \$0.00 \$0.00 0 0 0 \$0.00 \$0.00 0 0 0 \$0.00 \$0.00 0 0 0 \$0.00 \$0.00	FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
sr Annual Water Annual Energy Saving WATER Total Saving LPY KWH MWH Dollar Saving Solo \$6.65.53 194,810 0 \$0.00 \$0.00 \$0.00 s 0 0 \$0.00 \$0.00 s 0 0 \$0.00 \$0.00 s 0 0 \$0.00 \$0.00 rs 76,000 \$31.54 \$31.54 c 0 0 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 \$0.00 c 0 \$0.00 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 \$0.00 ds 0 0 \$0.00 \$0.00	Saving LPY KW KWH MWH Dollar Saving WATER ELEC ELEC GAS Saving LPY KW KWH MWH Dollar Saving 194,810 0 0 0 \$0.00	2	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
Saving LPY ELEC RWH GAS RWH Dollar Saving Dollar Saving S85.53 Dollar Saving PS6.53 LEC RWH RWH RWH RWH RWH RWH Dollar Saving S85.53 Dollar Saving S85.53 S80.85 \$80.85 \$85.53 CO \$0.00	Saving LPY ELEC ELEC GAS (AWH MWH MWH MWH MWH LOIIar Saving 194,810 ELEC ELEC GAS (AWH MWH MWH MWH LOIIar Saving 194,810 CO \$80.85 194,810 0 0 \$0.00 194,810 0 0 \$0.00 5 0 0 \$0.00 5 0 0 \$0.00 6 0 0 \$0.00 6 0 0 \$0.00 6 0 0 \$0.00 6 0 \$0.00 \$0.00 6 0 \$0.00 \$0.00 6 0 \$0.00 \$0.00 6 0 \$0.00 \$0.00 6 0 \$0.00 \$0.00 6 0 \$0.00 \$0.00 7 \$0.00 \$0.00 \$0.00 8 \$0.00 \$0.00 \$0.00 8 \$0.00 \$0.00 \$0.00 9 \$0.00 \$0.00 \$0.00 9 \$0.00 \$0.00	ECO Number	Annual Water	Annual		Saving	WATER	Total	Total
ks 194,810 0 \$80.85 \$85.53 ks 0 0 \$0.00 \$0.00 s 0 0 \$0.00 \$0.00 s 0 0 \$0.00 \$0.00 ts 76,000 \$0.00 \$0.00 \$0.00 ds 0 0 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 \$0.00 t 0 \$0.00 \$0.00 \$0.00 t 0 \$0.00 \$0.00 \$0.00 t 0 \$0.00 \$0.00 \$0.00	ks 0 0 0 880.85 0 0 50.00 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ECO Type		ELEC	ELEC	GAS	Dollar Saving	Dollar Saving	Dollars invested
ks 0 \$0.00 \$0.00 194,810 0 0 \$80.85 \$85.53 s 0 \$0.00 \$0.00 \$0.00 s 0 0 \$0.00 \$0.00 ts 76,000 \$31.54 \$31.54 ts \$0.00 \$0.00 \$0.00 ds \$0.00 \$0.00 t \$0.00 \$0.00 t \$0.00 \$0.00 t \$0.00 \$0.00	ks 0 0 0 \$0.00 194,810 0 0 0 \$80.85 0 0 0 0 \$80.00 76,000 ts 76,000 0 0 0 \$50.00 \$31.54 0 \$0.00 column and a \$0.00 t 0 0 0 0 \$0.00 t 0 0 0 0 \$0.00 t 0 0 0 0 \$0.00	1	1			0	\$80.85	\$85.53	\$489.60
194,810 0 0 0 \$80.85 \$85.53 0 0 0 0 \$0.00 \$0.00 76,000 0 0 0 \$31.54 \$31.54 ts 76,000 \$31.54 \$31.54 0 0 0 \$50.00 \$0.00 ds 0 0 0 \$50.00 \$0.00 t t 0 0 0 0 \$50.00 \$0.00	ts 76,000 0 0 \$80.85	Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
ts 76,000	s	ECO1 TOTAL:	194,810	0	0	0	\$80.85	\$85.53	\$489.60
ts	ts 76,000 0 0 \$0.00	2	0			0	\$0.00	\$0.00	\$0.00
ts 76,000 0 0 0 \$0.00 \$0.00 76,000	ts 76,000 0 0 \$0.00 \$31.54 ts 76,000 \$31.54	Misc. Sinks							
ts 76,000 \$31.54 \$31.54 \$31.54 76,000 \$31.54 \$31.54 \$31.54 0 \$0.00 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00	ts 76,000 ts 76,000 76,000 76,000 0 831.54 0 80.00 color \$0.00 col	ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
ts 76,000 76,000 76,000 76,000 831.54 \$31.54 \$31.54 \$0.00	ts 76,000	က	76,000		·		\$31.54	\$31.54	\$120.10
76,000 \$31.54 \$31.54 0 \$0.00 \$0.00 ds 0 0 0 \$0.00 t 0 \$0.00 \$0.00 t 0 0 0 \$0.00 0 \$0.00 0 \$0.00 0 \$0.00 0 \$0.00 0 \$0.00 0 \$0.00 0 \$0.00 0 \$0.00 0 \$0.00	76,000 \$31.54 0 \$0.00 ds \$0.00 the control of \$0.00 the control of \$0.00 the control of \$0.00 the control of \$0.00 0 \$0.00 0 \$0.00 0 \$0.00	Water Closets							
ads	ads	ECO3 TOTAL:	76,000				\$31.54	\$31.54	\$120.10
ads	ads 0 0 0 \$0.00 -: 0 0 0 \$0.00 -: 0 0 0 0 \$0.00 -: 0 0 0 0 \$0.00	4 Hrinole	0				\$0.00	\$0.00	\$0.00
ads 0 \$0.00 \$0.00 \$0.00 30.0	ads 0 0 0 \$0.00 \$0.00 1	Olligio							
ads 0 \$0.00 \$0.00 :: 0 0 0 \$0.00 :: 0 0 \$0.00 \$0.00 :: 0 0 \$0.00 \$0.00 :: 0 0 \$0.00 \$0.00	ads 0 0 \$0.00 ads on the solution of the solut	ECO4 TOTAL:	0				\$0.00	\$0.00	\$0.00
nt	nt	5 Shower Heads	0			0	\$0.00	\$0.00	\$0.00
nt 	nt 	ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
00.0\$ 00.0\$ 0 0 0	00.00\$ 0 0 0	6 Equipment Related							
		ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
			П						

Systems Engineering and Management Corporation, Knoxville, TN

	FY94S EEAP FT	K K	FY94S EEAP FT. KNOX WAER CONSERVATION STUDY	S NOI	TUDY		102
	CALC	ULAT	CALCULATION WORK SHEET 1			DATE:	29 Oct 94
FACILITY NO.:	1054		FUNCTION:	,	Maintenance	93	
Occupancy:			Operating Hours:	,	8		
ECO Number	e System		Retrofited Fixture System	E	Usage	Fixtures	Water Leaks
ECO Type		LPM	Description	LPM	HRS/YR	Quantity	Eliminated LPY
1 Lavatory Sinks	Public Lavatory	9.5	Spring Loaded Faucets	4.7	730	2	
ECO1 TOTAL:		LPM		LPM		5	0
2							0
Misc. Sinks							
ECO2 TOTAL:		LPF		LPF	#FL/YR	0	0
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	3000	4	
Water Closets			Repair Kit				
ECO3 TOTAL:		LPF		LPF	#FL/YR	4	0
4	Wall Mounted Flush Valve	5.68	Install 1.0 GPF Flush Valve	3.79	18250	2	
Urinals			Repair Kit				
ECO4 TOTAL:		LPM		LPM	HRS/YR	7	0
5							0
Shower Heads							
ECO5 TOTAL:		LPM		LPM		0	0
9							
Equipment							
Related							
ECO6 TOTAL:						0	0

Systems Engineering and Management Corporation, Knoxville, TN

		CAL	LCULAT		CULATION WORK SHEET 2		
FACILITY NO.: W.	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ECO Number A	Annual Water	Annual	Energy S	Saving	WATER	Total	Total
	Saving LPY	ELEC		GAS MWH	Dollar Saving	Dollar Saving	Dollars Invested
_	1,308,525			3	\$543.04	\$577.62	\$1,224.00
Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO1 TOTAL:	1,308,525	0	0	3	\$543.04	\$577.62	\$1,224.00
2	0			0	\$0.00	\$0.00	\$0.00
Misc. Sinks	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
3	45,600				\$18.92	\$18.92	\$240.19
Water Closets	0				\$0.00	\$0.00	\$0.00
	0				\$0.00	\$0.00	\$0.00
ECO3 TOTAL:	45,600				\$18.92	\$18.92	\$240.19
4	68,985				\$28.63	\$28.63	\$127.30
Urinals	0				\$0.00	\$0.00	\$0.00
	0				\$0.00	\$0.00	\$0.00
ECO4 TOTAL:	68,985				\$28.63	\$28.63	\$127.30
2	0			0	\$0.00	\$0.00	\$0.00
Shower Heads	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
9	0			0	\$0.00	\$0.00	\$0.00
Equipment	0			0	\$0.00	\$0.00	\$0.00
Related	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

	4	- -		aks	1 LPY																					
102	29 Oct 94			Water Leaks	Eliminated LPY			0	0		c			0			0	0			٥					0
	DATE:	e O		Fixtures	Quantity	2		2			c		1	2			 0				э					0
TUDY		Maintenance	8	_	HRS/YR	730					#FI WR	18250	0070	#FL/YR			HRS/YR									
S NOI			'	Ε	LPM	4.7		LPM			DE	13.2	1.0	LPF			LPM				7 8					
FY94S EEAP FT. KNOX WARER CONSERVATION STUDY	CALCULATION WORK SHEET 1	FUNCTION:	Operating Hours:	Retrofited Fixture System	Description	Spring Loaded Faucets						Install 3.5 GPE Flush Valve														
T. KN	CULAT		•	1 1	LPM	9.5		LPM				17	-	LPF			LPM				L					
FY94S EEAP F	CAL	1055		Existing Fixture System	Description	Public Lavatory						Floor Mounted Flush Valve														
		FACILITY NO.:	Occupancy:	ECO Number	ECO Type		Lavatory Sinks	ECO1 TOTAL:	2	Misc. Sinks	ECO2 TOTAL.	3007	Water Closets	ECO3 TOTAL:	4	Urinals	ECO4 TOTAL:	5	Shower Heads	1	ECO5 IOIAL:	9	Equipment	Related		ECO6 TOTAL:

Systems Engineering and Management Corporation, Knoxville, TN

### 10.51 \$//kVH Demand Rate:	Mater Rate: 0.42 \$/KL Energy Rate: Gas Rate: 10.51 \$/MVH Demand Rate: Total Annual Water Annual ELEC ELEC ELEC GAS WATER Total Saving LPY KWH KWH MWH Dollar Saving S0.00 \$0.00 Sc 23,410 0 0 0 \$0.00 \$0.00 \$0.00 S 23,410 0 0 0 \$0.00 \$0.00 \$0.00 S 23,410 0 0 \$0.00 \$0.00 \$0.00 \$0.00 S 23,410 0 0 \$0.00 \$0.00 \$0.00 \$0.00 0 0 0 \$0.00 \$0.00 \$0.00 \$0.00 138,700 0 0 \$0.00 \$0.00 \$0.00 \$0.00 138,700 0 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 0 0 0 \$0.00 \$0.00 \$0.00 \$0.00 <th< th=""><th>Water Rate: Gas Rate: Annual W Saving 523,410 0 0 0 0 0 138,700 s 0 138,700 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0</th><th></th><th>\$/KL s/MWH inergy Sav ELEC G KWH M</th><th>MW 1</th><th>Energy Rate:</th><th></th><th>K/W/H</th></th<>	Water Rate: Gas Rate: Annual W Saving 523,410 0 0 0 0 0 138,700 s 0 138,700 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		\$/KL s/MWH inergy Sav ELEC G KWH M	MW 1	Energy Rate:		K/W/H
Number Annual Water Annual Energy Saving Number Annual Water ELEC ELEC GAS CO Type Saving LPY KW KWH MWH Dollar Saving Dollar Saving LAY KWH MWH Dollar Saving Dollar Saving LAY Si23,410 CO CO Si23,000 Si23,000 Si23,000 Si23,000 CO CO Si23,000 Si23,000 CO CO CO Si23,000 Si23,000 CO CO CO CO CO CO CO	O	Colored Colo	_					
O Number Annual Water Annual Energy Saving WATER Total CO Type Saving LPY KWH MWH Dollar Saving Dollar Saving LOT Ype Saving LPY KWH MWH Dollar Saving Dollar Saving LOT Yelves 523,410 0 0 \$0.00 \$0.00 TOTAL: 523,410 0 0 \$0.00 \$0.00 Sc. Sinks 0 0 0 \$0.00 \$0.00 Sc. Sinks 0 0 \$0.00 \$0.00 \$0.00 TOTAL: 0 \$0.00 \$0.00 \$0.00 \$0.00 TOTAL: 0 \$0.00 \$0.00 \$0.00 \$0.00 Sc. Color \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 <	O Number Annual Water Annual ELEC EL	O Number Annual W CO Type Saving 1 523,410 2 0 TOTAL: 523,410 2 0 Sc. Sinks 0 TOTAL: 0 3 138,700 er Closets 0 TOTAL: 138,700 4 0 Urinals 0		o	ing AS WH	Demand Rate:		\$/KW
CO Type Saving LPY (WW KWH KWH KWH KWH KWH KWH KWH KWH KWH K	CO Type Saving LPY KW KWH 1 523,410 1 0 1 0 1 0 1 0 1 0 2 0 2 0 2 0 2 0 3 138,700 6 0 1 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	CO Type Saving 1 523,410 1 1017 Sinks 0 2 0 2 0 2 0 3 138,700 er Closets 0 TOTAL: 0 3 138,700 drinals 0			WH T	WATER	Total	Total
ttory Sinks 0 0 0 \$0.00	1 523,410 ttory Sinks 0 2 0 2 0 2 0 2 0 2 0 2 0 3 138,700 6 0 10 0 138,700 0 10 0 <td>1 523,410 ttory Sinks 0 2 0 sc. Sinks 0 TOTAL: 0 3 138,700 er Closets 0 TOTAL: 0 4 0 Urinals 0</td> <td></td> <td></td> <td>← c</td> <td>Dollar Saving</td> <td>Dollar Saving</td> <td>Dollars Invested</td>	1 523,410 ttory Sinks 0 2 0 sc. Sinks 0 TOTAL: 0 3 138,700 er Closets 0 TOTAL: 0 4 0 Urinals 0			← c	Dollar Saving	Dollar Saving	Dollars Invested
ttory Sinks 0 \$0.00 \$0.00 TOTAL: 523,410 0 0 \$0.00 TOTAL: 523,410 0 1 \$217.22 \$0.00 Sc. Sinks 0 0 0 \$0.00 \$0.00 Sc. Sinks 0 0 0 \$0.00 \$0.00 TOTAL: 0 0 0 \$0.00 \$0.00 TOTAL: 0 0 \$0.00 \$0.00 \$0.00 TOTAL: 0 \$0.00 \$0.00 \$0.00 TOTAL: 0 \$0.00 \$0.00 \$0.00 Verificates 0 \$0.00 \$0.00 \$0.00 Verificates 0 \$0.00 \$0.00 \$0.00 Verificates 0 \$0.00 \$0.00 \$0.00 F 0 \$0.00 \$0.00 \$0.00 F 0 \$0.00 \$0.00 \$0.00 F 0 \$0.00 \$0.00 \$0.00 <t< td=""><td>ttory Sinks 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0</td><td>ttory Sinks TOTAL: 2 sc. Sinks TOTAL: 3 er Closets 4 Urinals</td><td>0 0</td><td></td><td>c</td><td>\$217.22</td><td>\$231.05</td><td>\$489.60</td></t<>	ttory Sinks 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ttory Sinks TOTAL: 2 sc. Sinks TOTAL: 3 er Closets 4 Urinals	0 0		c	\$217.22	\$231.05	\$489.60
TOTAL: 523,410 0 0 1 \$0.00 \$0.	TOTAL: 523,410 0 0 2 0 0 0 2 0 0 0 TOTAL: 0 0 0 0 TOTAL: 0 0 0 TOTAL: 0 0	TOTAL: 2 sc. Sinks TOTAL: 3 er Closets 4 Urinals	0 0		_ >	\$0.00	\$0.00	\$0.00
TOTAL: 523,410 0 1 \$217.22 \$231.05 2 0 0 \$0.00 \$0.00 sc. Sinks 0 0 \$0.00 \$0.00 TOTAL: 0 0 \$0.00 \$0.00 3 138,700 \$0.00 \$0.00 \$0.00 TOTAL: 138,700 \$0.00 \$0.00 \$0.00 TOTAL: 0 \$0.00 \$0.00 \$0.00 Urinals 0 \$0.00 \$0.00 \$0.00 TOTAL: 0 \$0.00 \$0.00 \$0.00 5 0 \$0.00 \$0.00 \$0.00 5 0 \$0.00 \$0.00 \$0.00 5 0 \$0.00 \$0.00 \$0.00 5 0 \$0.00 \$0.00 \$0.00 6 0 \$0.00 \$0.00 \$0.00 6 0 \$0.00 \$0.00 \$0.00 6 0 \$0.00 \$0.00 <td>TOTAL: 523,410 0 0 2 0 0 0 sc. Sinks 0 0 0 TOTAL: 0 0 0 er Closets 0 0 0 er Closets 0 0 0 Urinals 0 0 0 Urinals 0 0 0 TOTAL: 0 0 0 wer Heads 0 0 0 quipment 0 0 0 quipment 0 0 0 Related 0 0 0 Contact 0 0 0 TOTAL: 0 0 0 TOTAL: 0 0 0</td> <td>TOTAL: 2 Sc. Sinks TOTAL: 3 er Closets TOTAL: 4 Urinals</td> <td>0 0</td> <td></td> <td>0</td> <td>\$0.00</td> <td>\$0.00</td> <td>\$0.00</td>	TOTAL: 523,410 0 0 2 0 0 0 sc. Sinks 0 0 0 TOTAL: 0 0 0 er Closets 0 0 0 er Closets 0 0 0 Urinals 0 0 0 Urinals 0 0 0 TOTAL: 0 0 0 wer Heads 0 0 0 quipment 0 0 0 quipment 0 0 0 Related 0 0 0 Contact 0 0 0 TOTAL: 0 0 0 TOTAL: 0 0 0	TOTAL: 2 Sc. Sinks TOTAL: 3 er Closets TOTAL: 4 Urinals	0 0		0	\$0.00	\$0.00	\$0.00
ks 0 \$0.00 \$0.00 ks 0 \$0.00 \$0.00 1 0 \$0.00 \$0.00 sets 0 0 \$0.00 sets 0 \$0.00 \$0.00 sets 0 \$0.00 \$0.00 sets 0 \$0.00 \$0.00 set 0 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 set 0 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	ks 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	φ <u>φ</u>	0		1	\$217.22	\$231.05	\$489.60
ks 0 \$0.00 \$0.00 138,700 0 \$0.00 \$0.00 sets 0 0 \$0.00 \$0.00 sets 0 \$0.00 \$0.00 \$0.00 set	ks 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	s sta	0		0	\$0.00	\$0.00	\$0.00
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sets 0 \$57.56 \$57.56 \$57.56 \$ets 0 \$0.00 \$	sets 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ste			0	\$0.00	\$0.00	\$0.00
sets 0 \$0.00 \$0.00 138,700 \$0.00 \$0.00 138,700 \$0.00 \$0.00 1 \$0.00 \$0.00 1 \$0.00 \$0.00	sets 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	st.				\$57.56	\$57.56	\$120.10
L: 138,700 \$0.00 \$	L: 138,700 b: 0 c: 0 d: 0					\$0.00	\$0.00	\$0.00
L: 138,700 \$57.56 \$57.56 \$0.00	L: 138,700 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0					\$0.00	\$0.00	\$0.00
0	L: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0					\$57.56	\$57.56	\$120.10
\$0.00 \$0.00	ads 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0					\$0.00	\$0.00	\$0.00
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L: 0	L: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0				\$0.00	\$0.00	\$0.00
eads 0 \$0.00 \$0.00 L: 0 0 \$0.00 \$0.00 L: 0 0 \$0.00 \$0.00 Int 0 0 \$0.00 \$0.00 Int 0 \$0.00 \$0.00 \$0.00	ads 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	•				\$0.00	\$0.00	\$0.00
tads 0 \$0.00 \$0.00 L: 0 0 \$0.00 \$0.00 0 0 \$0.00 \$0.00 \$0.00 int 0 \$0.00 \$0.00 \$0.00 1 0 \$0.00 \$0.00 \$0.00 1 0 \$0.00 \$0.00 \$0.00	L: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0				0	\$0.00	\$0.00	\$0.00
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00.0\$ 0.00 0 0 0 0			0	0	0	\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

	FY94S FFAP F1	T KN	T KNOX WA FR CONSERVATION STILLY	SNO	TUDY		1 2
	CAL	CULAT	CALCULATION WORK SHEET 1			DATE:	31 Oct 94
FACILITY NO. :	1117		FUNCTION:		Distinguished Visitors	ned Visitor	S
Occupancy:	10		Operating Hours:	·	24		
ECO Number	Existing Fixture System	4 _ I	Retrofited Fixture System	E	Usage	Fixtures	Water Leaks
ECO Type	Description	LPM	Description	LPM	HRS/YR	Quantity	Eliminated LPY
	Public Lavatory	15	Spring Loaded Faucets	4.7	130	16	
Lavatory Sinks							
ECO1 TOTAL:		LPM		LPM		16	0
2							
Misc. Sinks							
ECO2 TOTAL:		LPF		LPF	#FL/YR	0	0
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	3600	14	
Water Closets			Repair Kit				
ECO3 TOTAL:		LPF		Hd]	#FL/YR	14	0
4	Wall Mounted Flush Valve	5.68	Install 1.0 GPF Flush Valve	3.79	1300	2	
Urinals							
ECO4 TOTAL:		LPM		LPM	HRS/YR	2	0
5							
Shower Heads							
. IATOT		20					
ECO3 101AL.	W. C.	I L L I M		ž L		0	
Fairinment							
Related							
500							
ECO6 TOTAL:	()			**		0	0

Systems Engineering and Management Corporation, Knoxville, TN

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		A 11 7		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	TED CONSER	TED CONSERVATION STUDY	2 OF 2	
	2 L	11943 EEAT		OM NOI	CIII ATION WORK SHEET 2			
FACILITY NO	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH	
1117	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW	_
Todamily OCE	Applied Water	Annual	Fnerav	Saving	WATER	Total	Total	
	5	ELEC	ELEC	GAS		Dollar Savind	Dollars Invested	
ECO Type	Saving LPY	A K	NWH	LIMW.	\$594.31	\$628.72	\$3,916.80	
1 I avatory Sinks	1,432,080			0	\$0.00	\$0.00	\$0.00	
Lavaioly office							¢2 946 80	_
ECO1 TOTAL:	1,432,080	0	0	က	\$594.31	\$628.72	\$0.00	
2	0			0	\$0.00	\$0.00		
Misc. Sinks								—
			c	٥	0000	\$0.00	\$0.00	_
ECO2 TOTAL:	0	D	٥		30.00	870 48	\$840.67	
3	191,520				\$79.48	97.8.40		
Water Closets								- T
					£70 A9	\$79.48	\$840.67	7
ECO3 TOTAL:	191,520				3/3.40	60 CA	\$127.30	
4	4,914				\$2.04	\$4.04		
Urinals								Т
					70.04	\$2.04	\$127.30	٦
ECO4 TOTAL:	4,914				\$4.04	0000	\$0.00	
2	0			0	\$0.00	\$0.00		
Shower Heads								T
14101		c	٥	_	00 05	\$0.00	\$0.00	T
ECOS IDIAL:	5		,	,				:
9								:
Equipment			-					
Related								
-								
ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00	\prod
						Management C	Section Engineering and Management Corporation, Knoxville, TN	z
SYSIEMS CORP	スポンプ			Systen	ıs Engineeriiiy aı	id mailageilleit		

	FY94S EEAP FT. KNOX W	T. KN(DX WER CONSERVATION STUDY	ON S.	rupy		102
	CALC	CULAT	CULATION WORK SHEET 1			DATE:	
FACILITY NO. :	1118		FUNCTION:	-1	Officers' C	Officers' Club/Dining	
Occupancy:	3 Meals / Day		Operating Hours:	7:3	7:30 am to 2 am	me .	
ECO Number	Existing Fixture System	I I	Retrofited Fixture System	E	Usage	Fixtures	Water Leaks
ECO Iype	Description	ר צו	Description	LPM	HKS/YK	Quantity	Eliminated LPY
1 Lavatory Sinks	Dual Faucets	G. 2.	Spring Loaded Faucets	4.7	1095	23	
ECO4 TOTAL.	(特別) (特別のない) ・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・	DM		MO		23	c
101 AL.		IN IN		MLL		3	
Z Misc. Sinks							
		2				,	
ECUZ IOIAL:		LPF		LPF	#FL/YR	0	0
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	10950	20	
Water Closets			Repair Kit				
ECO3 TOTAL:		LPF		LPF	#FL/YR	20	0
4	Wall Mounted Flush Valve	5.68	Install 1.0 GPF Flush Valve	3.79	10950	6	
Urinals			Repair Kit				
ECO4 TOTAL:		LPM		LPM	HRS/YR	6	0
5 Shower Heads							
ECO5 TOTAL:		LPM		LPM		0	0
9	2 Comp. Sink (1 faucets)	9.2	Install Aerators	9.5	2190	_	
Equipment Related	1 Comp. Sink (1 faucets)	17	Install Aerators	9.5	2190	2	
50000							
ECO6 TOTAL:						က	0

Systems Engineering and Management Corporation, Knoxville, TN

FACILITY NO.: Water Rate: 0.42 \$/KL Energy Rate: \$/KWH 1118 Gas Rate: 10.51 \$/MWH Energy Rate: \$/KWH ECO Number Annual Water Annual Energy Saving WATER Total Total ECO Type Saving LPY KWH MWH MWTER Total Total Lavatory Sinks 0 0 0 \$0.00 \$0.00 \$0.00 ECOT TOTAL: 9,028,823 0 0 \$0.00 \$0.00 \$0.00 ECOT TOTAL: 9,028,823 0 0 \$0.00 \$0.00 \$0.00 Miss. Sinks 0 0 0 \$0.00 \$0.00 \$0.00 ECO2 TOTAL: 0 0 0 \$0.00 \$0.00 \$0.00 Mater Closets 0 0 0 \$0.00 \$0.00 \$0.00 ECO2 TOTAL: 832,200 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 ECO3 TOTAL: 186,260 \$0.00	CALCULAT Water Rate: 0.42 \$/KL Gas Rate: 10.51 \$/MWH Fig. 200 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		FY9	FY94S EEAP	FT. KN	FT. KNOX W	ER CONSER	ER CONSERVATION STUDY	2 OF 2
Gas Rate: 0.42 \$/K L Energy Rate: \$/K L	Water Rate: 0.42 \$/KL Gas Rate: 10.51 \$/MWH r Annual Water Annual Energy & KW KWH Saving LPY KW KWH KWH Saving LPY KW KWH KWH 9,028,823 0 0 0 0 0 0 0 0 0 0 0 832,200 0 0 0 0 0 186,260 0 0 0 0 0 186,260 0 0 0 0 0 0 0 0 0 0 0 1,971,000 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			S	COLAT	ON NO	RK SHEET 2		
Annual Water Annual Energy Saving WATER Total	Gas Rate: 10.51 \$/MWH r Annual Water Annual Energy ELEC ELEC <t< td=""><td>FACILITY NO.:</td><td>Water Rate:</td><td>0.42</td><td>\$/KL</td><td></td><td>Energy Rate:</td><td></td><td>\$/KWH</td></t<>	FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
sr Annual Water Annual Energy Saving WATER Total Saving LPY KWH MWH Dollar Saving 53,746.96 \$3,893.37 ks 0 0 0 \$0.00 \$0.00 \$0.00 s 0 0 \$0.00 \$0.00 \$0.00 \$0.00 s 0 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 s 0 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 s 0 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 s 0 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	Saving LPY KW KWH Saving LPY KW ELEC) - -	Gas Rate:	1	\$/MWH		Demand Rate:		\$/KW
ks ELEC ELEC GAS Dollar Saving Dollar Saving Dollar Saving Dollar Saving Dollar Saving P.3.746.96 \$3.803.37 KWH MWH Dollar Saving B.3.60.00 \$3.00 B.3.60.00 \$3.00 B.3.60.00 \$3.00 B.3.60.00 \$3.00 B.3.60.00 \$3.60.00 \$3.60.00 \$3.60.00 \$3.60.00 \$3.60.00 \$3.60.00 \$3.60.00 \$3.60.00 \$3.60.00 \$3.46.36 \$3.46.30 \$3.00 <td> Saving LPY KW KWH KWH 9,028,823 </td> <td>ECO Number</td> <td>Annual Water</td> <td>Annual</td> <td></td> <td>saving</td> <td>WATER</td> <td>Total</td> <td>Total</td>	Saving LPY KW KWH KWH 9,028,823	ECO Number	Annual Water	Annual		saving	WATER	Total	Total
ks 9,028,823 14 \$3,746,96 \$3,893.37 ks 0 \$0.00 \$0.00 \$0.00 s 0 \$0.00 \$0.00 \$0.00 s 0 14 \$3,746.96 \$3,893.37 s 0 0 \$0.00 \$0.00 s 0 0 \$0.00 \$0.00 s 0 \$0.00 \$0.00 \$0.00 s 0 \$0.00 \$0.00 \$0.00 s \$0.00 \$0.00 \$0.00 \$0.00 d \$0.00 \$0.00 \$0.00 \$0.00 s \$0.00 \$0.00 \$0.00 \$0.00 d \$0.00 \$0.00 \$0.00 \$0.00 d \$0.00 \$0.00 \$0.00 \$0.00	Ks 9,028,823	ECO Type		ELEC	ELEC	GAS	Dollar Saving	Dollar Saving	Dollars Invested
ks 0 \$0.00 \$0.00 ks 0 \$0.00 \$0.00 \$0.028,823 0 0 \$0.00 \$0 0 \$0.00 \$0.00 \$0 0 \$0.00 \$0.00 \$0 0 \$0.00 \$0.00 \$0 \$0.00 \$0.00 \$0.00 \$0 \$0.00 \$0.00 \$0.00 \$12,200 \$0 \$0.00 \$0.00 \$2,200 \$0.00 \$0.00 \$0.00 \$2,200 \$0.00 \$0.00 \$0.00 \$2,200 \$0.00 \$0.00 \$0.00 \$0 \$0.00 \$0.00 \$0.00 \$0 \$0.00 \$0.00 \$0.00 \$0 \$0.00 \$0.00 \$0.00 \$0 \$0.00 \$0.00 \$0.00 \$0 \$0.00 \$0.00 \$0.00 \$0 \$0.00 \$0.00 \$0.00 \$0 \$0.00 \$0.00 \$0.00 <td>ks 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0</td> <td>1</td> <td>8</td> <td></td> <td></td> <td>14</td> <td>\$3,746.96</td> <td>\$3,893.37</td> <td>\$5,385.60</td>	ks 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1	8			14	\$3,746.96	\$3,893.37	\$5,385.60
9,028,823 0 \$0.00 \$0.00 s \$0.00 \$0.00 \$0.00 ts 0 \$0.00 \$0.00 ts 0 \$0.00 \$0.00 t \$0.00 \$0.00 \$0.00 t \$0.00 \$0.00 \$0.00 ds \$0.00 \$0.00 \$0.00 ds \$0.00 \$0.00 \$0.00 t	0	Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
9,028,823 0 14 \$3,746,96 \$3,993,37 s 0 0 \$0.00 \$0.00 s 0 0 \$0.00 \$0.00 s 0 0 \$0.00 \$0.00 ts 0 0 \$0.00 \$0.00 ts 0 \$0.00 \$0.00 \$0.00 ts 0 \$0.00 \$0.00 \$0.00 ts 0 \$0.00 \$0.00 \$0.00 t 186,260 \$0.00 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 \$0.00 t 1,971,000 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 \$0.00 t 0 \$0.00 \$0.00 \$0.00 t 0 \$0.00 \$0.00 \$0.00	832,200 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		0			0	\$0.00	\$0.00	\$0.00
s 0 \$0.00 \$0.00 s 0 \$0.00 \$0.00 s 0 \$0.00 \$0.00 s \$0.00 \$0.00 \$0.00 ts 0 \$0.00 \$0.00 ts 0 \$0.00 \$0.00 ts 0 \$0.00 \$0.00 186,260 \$0.00 \$0.00 \$0.00 do \$0.00 \$0.00 \$0.00 do \$0.00 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 ds \$0.00 \$0.00 \$0.00 t \$0.00 \$0.00 \$0.00 t 1,971,000 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 <tr< td=""><td>832,200</td><td>ECO1 TOTAL:</td><td>9,028,823</td><td>0</td><td>0</td><td>14</td><td>\$3,746.96</td><td>\$3,893.37</td><td>\$5,385.60</td></tr<>	832,200	ECO1 TOTAL:	9,028,823	0	0	14	\$3,746.96	\$3,893.37	\$5,385.60
s 0 \$0.00 \$0.00 \$0.00 c 0 0 \$0.00 \$0.00 s \$0.00 \$0.00 \$0.00 \$0.00 ts 0 0 \$0.00 \$0.00 ts 0 \$0.00 \$0.00 \$0.00 ts \$0.00 \$0.00 \$0.00 \$0.00 ts \$0 \$0.00 \$0.00 \$0.00 ts \$0 \$0.00 \$0.00 \$0.00 ts \$0.00 \$0.00 \$0.00 \$0.00 t \$0.00 \$0.00 \$0.00 \$0.00 <td>s 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0</td> <td>2</td> <td>0</td> <td></td> <td></td> <td>0</td> <td>\$0.00</td> <td>\$0.00</td> <td>\$0.00</td>	s 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2	0			0	\$0.00	\$0.00	\$0.00
0 0 \$0.00 \$0.00 10 0 \$0.00 \$0.00 45 0 \$0.00 \$0.00 45 0 \$0.00 \$0.00 45 0 \$0.00 \$0.00 832,200 \$0.00 \$0.00 \$0.00 832,200 \$0.00 \$0.00 \$0.00 186,260 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 4s 0 \$0.00 \$0.00 4s 0 \$0.00 \$0.00 4s 0 \$0.00 \$0.00 4s 0 \$0.00 \$0.00 4s \$0.00 \$0.00 \$0.00 50.00 \$0.00 \$0.00 \$0.00 6 \$0.00 \$0.00 \$0.00 7s \$0.00 \$0.00 \$0.00 8c \$0.00 \$0.00 \$0.00 9c \$0.00 \$0.00 \$0.00	ts 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Misc. Sinks	0			0	\$0.00	\$0.00	\$0.00
ts 0 0 \$0.00 \$0.00 ts 0 \$0.00 \$0.00 \$0.00 ts 0 \$0.00 \$0.00 \$0.00 832,200 \$0.00 \$0.00 \$0.00 832,200 \$0.00 \$0.00 \$0.00 186,260 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 t 1,971,000 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 \$0.00 t 0 \$0.00 \$0.00 \$0.00 t 1,971,000 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 \$0.00 <td>ts 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0</td> <td></td> <td>0</td> <td></td> <td></td> <td>0</td> <td>\$0.00</td> <td>\$0.00</td> <td>\$0.00</td>	ts 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		0			0	\$0.00	\$0.00	\$0.00
ts \$345.36 \$345.36 ts 0 \$0.00 \$0.00 832,200 \$0.00 \$0.00 \$0.00 832,200 \$0.00 \$0.00 \$0.00 186,260 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 t 1,971,000 \$0.00 \$0.00 t 1,971,000 \$0.00 \$0.00 t 0 \$0.00 \$0.00 t 1,971,000 \$0.00 \$0.00 t 1,971,000 \$0.00 \$0.00 t 1,971,000 \$0.00 \$0.00 t 0 \$0.00 \$0.00 t \$0.00 \$0.00 \$0.00 t \$0.00 \$0.00 t \$0.00 \$0.00 \$0.00 t \$0.00 \$0.00 \$0.00 t	#\$5,200 #\$2,20	ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
ts 0 \$0.00 \$0.00 832,200 \$0.00 \$0.00 \$0.00 832,200 \$0.00 \$0.00 \$0.00 186,260 \$0.00 \$0.00 \$0.00 4s 0 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 t 1,971,000 \$0.00 \$0.00 t 0 \$0.00 \$0.00 t 1,971,000 \$0.00 \$0.00 t 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 t 1,971,000 \$0.00 \$0.00 t 0 \$0.00 \$0.00 0	ts 0 0	3	832,200				\$345.36	\$345.36	\$1,200.96
0 \$0.00 \$0.00 832,200 \$345.36 \$0.00 186,260 \$0.00 \$0.00 0 \$0.00 \$0.00 186,260 \$0.00 \$0.00 4s 0 \$0.00 6s \$0.00 \$0.00 7s \$0.00 \$0.00 8s \$0.00 \$0.00 8s \$0.00 \$0.00 9 \$0.00 \$0.00 9 \$0.00 \$0.00 <t< td=""><td>832,200 832,200 186,260 0 0 0 t 1,971,000 0 0 0 0 0 0 0 0 0 0 0 0</td><td>Water Closets</td><td>0</td><td></td><td></td><td></td><td>\$0.00</td><td>\$0.00</td><td>\$0.00</td></t<>	832,200 832,200 186,260 0 0 0 t 1,971,000 0 0 0 0 0 0 0 0 0 0 0 0	Water Closets	0				\$0.00	\$0.00	\$0.00
832,200 \$345.36 \$345.36 \$345.36 186,260 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 4s 0 \$0.00 \$0.00 4s 0 \$0.00 \$0.00 4s 0 \$0.00 \$0.00 6 0 \$0.00 \$0.00 6 0 \$0.00 \$0.00 7 \$0.00 \$0.00 \$0.00 8 \$0.00 \$0.00 \$0.00 9 \$0.00 \$0.00 \$0.00 1 0 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.0	832,200 186,260 0 0 186,260 0 0 0 0 0 0 0 0 0 0 0 0 0		0				\$0.00	\$0.00	\$0.00
186,260 \$77.30 \$77.30 0 \$0.00 \$0.00 0 \$0.00 \$0.00 186,260 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 t 1,971,000 0 \$0.00 \$0.00 0 0 \$0.00 \$0.00 \$0.00 0 0 \$0.00 \$0.00 \$0.00 0 0 \$0.00 \$0.00 \$0.00 0 0 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00	186,260	ECO3 TOTAL:	832,200				\$345.36	\$345.36	\$1,200.96
0 \$0.00 \$0.00 186,260 \$77.30 \$0.00 ds 0 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 t 1,971,000 0 \$0.00 \$0.00 t 1,971,000 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 \$0.00 t 1,971,000 0 \$0.00 \$0.00 t 1,971,000 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 \$0.00 t 1,971,000 0 \$0.00 \$0.00	ds 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	7	186,260				\$77.30	\$77.30	\$572.83
0 \$0.00 \$0.	t 1,971,000 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Urinals	0				\$0.00	\$0.00	00.0\$
486,260 \$77.30 \$77.30 0 0 \$0.00 \$0.00 ds 0 0 \$0.00 \$0.00 0 0 0 \$0.00 \$0.00 0 0 \$0.00 \$0.00 \$0.00 t 1,971,000 0 \$0.00 \$0.00 0 0 \$0.00 \$0.00 \$0.00 0 0 \$0.00 \$0.00 \$0.00 0 0 \$0.00 \$0.00 \$0.00 1,971,000 0 3 \$8.18 \$0.00	ds 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		0				\$0.00	\$0.00	\$0.00
ds 0 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 0 0 \$0.00 \$0.00 t 0 0 \$0.00 \$0.00 t 1,971,000 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 t <t< td=""><td>ds 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0</td><td>ECO4 TOTAL:</td><td>186,260</td><td></td><td></td><td></td><td>\$77.30</td><td>\$77.30</td><td>\$572.83</td></t<>	ds 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ECO4 TOTAL:	186,260				\$77.30	\$77.30	\$572.83
ds 0 \$0.00 \$0.00 0 0 \$0.00 \$0.00 0 0 \$0.00 \$0.00 t 1,971,000 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 1,971,000 0 3 \$8.18 \$40.14	ds 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2	0			0	\$0.00	\$0.00	\$0.00
0 0 \$0.00 \$0.00 0 0 \$0.00 \$0.00 t 1,971,000 0 \$0.00 \$0.00 t 0 0 \$0.00 \$0.00 0 0 \$0.00 \$0.00 \$0.00 0 0 \$0.00 \$0.00 \$0.00 1,971,000 0 3 \$8.18 \$40.14	t 1,971,000 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Shower Heads	0			0	\$0.00	\$0.00	\$0.00
0 0 0 \$0.00 \$0.00 t 1,971,000 0 \$0.00 \$0.00 t 1,971,000 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00 1,971,000 0 3 \$8.18 \$40.14	t 1,971,000 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		0			0	\$0.00	\$0.00	\$0.00
t 1,971,000 \$0.00 \$0.00 \$0.00 t 1,971,000 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 \$0.00 0 0 \$0.00 \$0.00 \$0.00 1,971,000 0 3 \$8.18 \$40.14	t 1,971,000 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
t 1,971,000 3 \$8.18 \$40.14 0 0 \$0.00 \$0.00 0 0 \$0.00 \$0.00 0 0 \$0.00 \$0.00 1,971,000 0 3 \$8.18 \$40.14	t 1,971,000 0 0 0 0 1,971,000 0 0	9	0			0	\$0.00	\$0.00	\$0.00
0 \$0.00 \$0.00 0 0 \$0.00 0 0 \$0.00 1,971,000 0 3 \$8.18 \$40.14	0 0 1,971,000 0 0	Equipment	1,971,000			က	\$8.18	\$40.14	\$16.16
0 \$0.00 \$0.00 0 \$0.00 \$0.00 1,971,000 0 3 \$8.18 \$40.14	0 0 1,971,000 0 0	Related	0			0	\$0.00	\$0.00	\$0.00
0 \$0.00 \$0.00 1,971,000 0 0 3 \$8.18 \$40.14	0 0 0 0 1,971,000 0 0		0			0	\$0.00	\$0.00	\$0.00
1,971,000 0 0 3 \$8.18 \$40.14	1,971,000 0 0 CORP		0			0	\$0.00	\$0.00	\$0.00
	SYSTEMS CORP Systems Engineering and Management Corporation, Knoxville, TN	ECO6 TOTAL:	1,971,000	0	0	3	\$8.18	\$40.14	\$16.16

Systems Engineering and Management Corporation, Knoxville, TN

	FY94S EEAP FT. KNOX WA	T. KNO	X WA R CONSERVATION STUDY	SNO	TUDY		1 2
	CALC	CULATI	CALCULATION WORK SHEET 1			DATE:	31 Oct 94
FACILITY NO.:	1131		FUNCTION:	'	Red Cross		
Occupancy:	15		Operating Hours:	'	œ		
ECO Number	Existing Fixture System		Retrofited Fixture System	E	Usage	Fixtures	Water Leaks
1 1	Public Lavatory	15	Spring Loaded Faucets	4.7	130	Quantity 1	Eliminated LPY
Lavatory Sinks	Public Lavatory	9.5	Spring Loaded Faucets	4.7	130	2	
ECO1 TOTAL:		LPM	10年の日本の日本の日本の日本の日本の日本の日本の日本の日本の日本の日本の日本の日本の	LPM		က	0
2 Misc. Sinks							
ECO2 TOTAL:		LPF		LPF	#FL/YR	0	0
3 Water Closets	Tank Type (public)	4.11.4	Install 1.6 GPF Tank Type Water Closet	9	5475	က	
ECO3 TOTAL:		LPF		LPF	#FL/YR	3	0
4 Urinals							
ECO4 TOTAL:		MAT		LPM	HRS/YR	0	0
Shower Heads ECO5 TOTAL:				LPM		0	0
Equipment Related							
ECO6 TOTAL:						0	0

Systems Engineering and Management Corporation, Knoxville, TN

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FACILITY NO.: Water Rate: 0.42 \$/KL Energy Rate: \$/KWH 1131 Gas Rate: 10.51 \$/MWH Demand Rate: \$/KWH ECO Number Annual Energy Saving LPY ELG ELEC ELEC ELG	Mater Rate: 0.42 \$/KL Energy Rate: \$/KV \$ \$ \$ \$ \$ \$ \$ \$ \$	Water Rate: 0.42 \$/KL			CAL	LCULATION WO	ION WO	CALCULATION WORK SHEET 2		
Annual Water Annual Energy Saving WATER Total	Rate: 10.51 \$/MWH ual Water of the color	Vate: 10.51 \$/MWH Ual Water Annual Energy ELEC ELEC Ing LPY KW KWH 9,505 0 0 3,210 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		#WM/\$
Saving LPY KWH KWH MWH Dollar Saving LEC ELEC GAS Saving LEC ELEC GAS Saving LEC ELEC GAS S37.14 \$539.29	ual Water Annual Energy & KW ng LPY KW KWH 9,505 0 0 3,210 0 0 0 0 0 8,695 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ual Water Annual Energy & LPY Annual Energy & KW ng LPY KW KWH 9,505 0 0 3,210 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ks Saving LPY KW KWH MWH Dollar Saving \$39.29 ks 99,505 0 \$37.14 \$39.29 se,505 0 0 \$38.68 \$40.92 restriction 0 0 \$50.00 \$0.00 s 0 0 0 \$0.00 s 0 0 \$0.00 \$0.00 se,695 0 0 \$0.00 \$0.00 se,695 0 0 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 \$0.00	9,505 3,210 0 0 0 0 8,695 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	9,505 3,210 0 0 0 0 0 0 8,695 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ECO Number	Annual Water	Annual		Saving	WATER	Total	Total
ks 89,505 0 \$37.14 \$39.29 182,715 0 0 \$38.68 \$40.92 182,715 0 0 \$75.83 \$80.22 182,715 0 0 \$0.00 \$0.00 18 0 0 0 \$0.00 18 88,695 0 0 \$0.00 \$0.00 10 0 \$0.00 \$0.00 \$0.00 10 0 \$0.00 \$0.00 \$0.00 10 0 \$0.00 \$0.00 \$0.00 10 0 \$0.00 \$0.00 \$0.00 10 0 \$0.00 \$0.00 \$0.00 10 0 \$0.00 \$0.00 \$0.00 10 0 \$0.00 \$0.00 \$0.00	9,505 3,210 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	9,505 3,210 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ECO Type		WX ELEC	ELEC	GAS MWH	Dollar Saving	Dollar Saving	Dollars Invested
ks 93,210 0 \$38.68 \$40.92 182,715 0 0 \$75.83 \$80.22 0 0 0 \$0.00 \$0.00 s 0 0 \$0.00 \$0.00 ts 88,695 \$36.81 \$36.81 \$36.81 ts 0 0 \$0.00 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 \$0.00 t 0 \$0.00 \$0.00 \$0.00 t 0 \$0.00 \$0.00 \$0.00 t 0 \$0.00 \$0.00 \$0.00	3,210 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3,210 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	-	89,505			0	\$37.14	\$39.29	\$244.80
182,715 0 0 \$75.83 \$80.22 s 0 0 \$0.00 \$0.00 s 0 0 \$0.00 \$0.00 ts 88,695 \$36.81 \$36.81 \$36.81 e 0 \$0.00 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 \$0.00 t 0 \$0.00 \$0.00 \$0.00	8,695 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	8,695 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Lavatory Sinks	93,210			0	\$38.68	\$40.92	\$489.60
s 0 \$0.00 \$0.00 s \$0.00 \$0.00 \$0.00 88,695 \$36.81 \$36.81 \$36.81 88,695 \$0.00 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 t \$0.00 \$0.00 \$0.00 t 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	8,695 0 0 0 0 0 0 0 0 0 0	ECO1 TOTAL:	182,715	0	0	0	\$75.83	\$80.22	\$734.40
88,695	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2	0			0	\$0.00	\$0.00	\$0.00
ts	8,695 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0	Misc. Sinks							
88,695 \$36.81 \$36.81 \$36.81	8,695 8,695 0 0 0 0 0 0 0 0	8,695 0 0 0 0 0 0 0 0 0	ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
ts 88,695 \$36.81 \$36.81 \$36.81 \$0.00	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	က	88,695				\$36.81	\$36.81	\$1,257.48
88,695 \$36.81 \$36.81 0 \$0.00 \$0.00 ds 0 0 0 \$0.00 t 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0	Water Closets							
0 \$0.00 \$0.00 \$0.00	0 0 0	0 0 0	ECO3 TOTAL:	88,695				\$36.81	\$36.81	\$1,257.48
ds	0 0 0	0 0 0	4	0				\$0.00	\$0.00	\$0.00
ds 0 0 0 \$0.00 \$0.00 t 0 0 0 \$0.00 \$0.00 t 0 0 0 \$0.00 \$0.00	0 0 0	0 0 0	Urinals				-			
ds 0 \$0.00 \$0.00 \$0.00 ds 0 0 \$0.00 \$0.00 \$0.00 t t 0 \$0.00 \$0.00 \$0.00	0 0 0	0 0 0	ECO4 TOTAL:	0				\$0.00	\$0.00	\$0.00
ds 0 0 0 \$0.00 \$0.00 t	0 0 0	0 0 0 0	2	0			0	\$0.00	\$0.00	\$0.00
t	0 0 0	0 0 0	Shower Heads							
t 0 0 0 \$0.00	0 0 0	0 0	ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
t 0 0 0 0 \$0.00	0 0	0 0	9							
00.00\$ 0 0 0 0	0 0	0 0 0	Equipment							
00.00 \$0.00	0 0	0 0 0	Related							
0000\$ 0000 \$0.00	0 0	0								
			ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

FACILITY NO.: 1138 FUNCTION: Occupancy: Varies Occupancy: ECO Number Existing Fixture System Retrofited Fixture System Description I Description I The Des	CTION: Hours: e System LPM Lcets 4.7 lee LPM S 9.5	Pool 10 Usage HRS/YR 130	DATE:	31 Oct 94
Varies Varies Service Sink Service Sink Floor Mounted Flush Valve 1138 Varies LPM LPM LPM 45 45 45 45 45 45 45 45 45 4	on: rs: stem LPM 4.7 4.7	age 3/7R		
Varies e Description LPM e Description LPM lish Service Sink 45 cs Service Sink 45 lish Valve 17 Insters	rs:			
r Existing Fixture System Description LPM Public Lavatory 15 S (Service Sink 45 LPM Service Sink 45 LPF Service Sink 15 Inst	stem			
Description LPM LPM Spri Spri Spri Service Sink 45 Eloor Mounted Flush Valve 17 Install Estate Est			Fixtures	Water Leaks
Service Sink 45 Floor Mounted Flush Valve 17 Install		130	Quantity	Eliminated LPY
Service Sink 45 Floor Mounted Flush Valve 17 Install			11	
Service Sink 45 Floor Mounted Flush Valve 17 Install			11	0
Floor Mounted Flush Valve 17 Install		130	-	
Floor Mounted Flush Valve 17 Install			-	
Floor Mounted Flush Valve 17 Install	LPF	#FL/YR	~	0
	ush Valve 13.2	2290	16	
ECO3 TOTAL:	LPF	#FL/YR	16	0
4 Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve		8000	7	
Urinals Repair Kit				
ECO4 TOTAL:	Ma	HRS/YR		0
Shower Heads				
ECO5 TOTAL:	L		0	0
Equipment				
Related				
ECO6 TOTAL:			0	0

Systems Engineering and Management Corporation, Knoxville, TN

FACILITY NO.: Water Rate: 0.42 \$/K/W Energy Rate: \$/K/WH 1138 Gas Rate: 10.51 \$/M/WH Demand Rate: \$/K/W ECO Number Annual Water Annual Energy Saving Annual Energy Saving WATER Total Total ECO Type Saving LPY KW KWH MWH Dollar Saving SA132.24 \$2,692.80 ECOT TOTAL: 276,900 0 2 \$408.59 \$432.24 \$2,692.80 Misc. Sinks 139,232 1 \$1.15 \$7.80 \$8.70 Water Closets 139,232 1 \$41.15 \$57.78 \$890.77 ECO2 TOTAL: 105,840 0 1 \$41.55 \$43.92 \$445.54 ECO5 TOTAL: 0 0 0 \$6.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00		FΥ9	FY94S EEA	P FT. KNOX W) ALCULATION WO	NOX WO	CALCULATION WORK SHEET 2	FER CONSERVATION STUDY SHEET 2	2 OF 2
Gas Rate: 10.51 \$\text{MWVH}\$ Demand Rate: \$\text{MVATER}\$ \$\text{Total}\$ \$\text{SAVing}\$ \$\text{SAVing}\$ \$\text{MVATER}\$ \$\text{Total}\$ \$\text{SAVing}\$	FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		#WX/\$
Saving LPY KWH MWH Dollar Saving Saving LEC ELEC GAS Saving PY KWH MWH Dollar Saving Saving LEC ELEC GAS S408.59 \$432.24 Saving LPY KWH MWH Dollar Saving S432.24 Saving LPY KWH MWH Dollar Saving S57.78 Saving LPY KWH MWH Dollar Saving S6.00 Saving LPY LPY LPY LPY LPY LPY LPY Saving LPY L	<u> </u>	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
Rise ELEC ELEC ELEC ELEC GAS Dollar Saving Dollar Saving Dollar Saving Pollar Saving P	ECO Number	Annual Water	Annual		Saving	WATER	Total	Total
ks 984,555 2 \$408.59 \$432.24 984,555 0 0 2 \$408.59 \$432.24 276,900 0 1 \$1.15 \$7.80 139,232 0 1 \$1.15 \$7.80 15,840 0 1 \$57.78 \$57.78 105,840 \$43.92 \$43.92 \$43.92 10 0 \$0.00 \$0.00 10 0 \$0.00 \$0.00 10 0 \$0.00 \$0.00	ECO Type		ELEC	ELEC	GAS	Dollar Saving	Dollar Saving	Dollars Invested
ks k	1	55			2	\$408.59	\$432.24	\$2,692.80
\$4,555 0 0 2 \$408.59 \$432.24 \$276,900 0 1 \$1.15 \$7.80 \$276,900 0 0 1 \$1.15 \$7.80 \$139,232 \$57.78 \$57.78 \$57.78 \$139,232 \$57.78 \$57.78 \$105,840 \$43.92 \$43.92 \$0 0 \$0.00 \$0.00 \$105,840 \$0.00 \$0.00 \$0.00 \$20.00 \$0.00 \$0.00 \$0.00	Lavatory Sinks							
s 276,900 1 \$1.15 \$7.80 276,900 0 1 \$1.15 \$7.80 45 139,232 \$57.78 \$57.78 \$57.78 139,232 \$57.78 \$57.78 \$57.78 105,840 \$43.92 \$43.92 \$43.92 4s 0 \$0.00 \$0.00 \$0.00 4s 0 \$0.00 \$0.00 \$0.00 4c 0 \$0.00 \$0.00 \$0.00 4c 0 \$0.00 \$0.00 \$0.00	ECO1 TOTAL:	984.555	0	0	2	\$408,59	\$432.24	\$2,692.80
s 276,900 0 1 \$1.15 \$7.80 139,232 0 1 \$57.78 \$57.78 139,232 \$57.78 \$57.78 105,840 \$43.92 \$43.92 0 0 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00	2	276,900			1	\$1.15	\$7.80	\$9.70
ts	Misc. Sinks							
tfs 139,232 \$57.78 \$57.78 139,232 \$57.78 \$57.78 105,840 \$43.92 \$43.92 ds 0 \$0.00 ds 0 \$0.00 t \$0.00 \$0.00 t \$0.00 \$0.00 t \$0.00 \$0.00 t \$0.00 \$0.00	ECO2 TOTAL:	276,900	0	0	1	\$1.15	\$7.80	\$9.70
tfs	3	139,232				\$57.78	\$57.78	\$960.77
139,232 \$57.78 \$57.78 105,840 \$43.92 \$43.92 105,840 0 \$0.00 ds 0 \$0.00 t 0 0 \$0.00 t 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00	Water Closets							
105,840 \$43.92 \$43.92 \$43.92 105,840 0 \$0.00 \$0.00 \$0.00 ds 0 0 \$0.00 \$0.00 t 0 0 \$0.00 \$0.00 t 0 0 \$0.00 \$0.00 t 0 0 \$0.00 \$0.00	ECO3 TOTAL:	139,232				\$57.78	\$57.78	\$960.77
105,840 \$43.92 \$43.92 \$43.92 0 0 \$0.00 \$0.00 ds 0 0 \$0.00 \$0.00 t 0 0 \$0.00 \$0.00 t 0 0 \$0.00 \$0.00	4	105,840				\$43.92	\$43.92	\$445.54
105,840 \$43.92 \$43.92 0 \$0.00 \$0.00 ds 0 0 \$0.00 t 0 0 \$0.00 t 0 0 \$0.00 t 0 0 \$0.00	Urinals							
ds 0 \$0.00 \$0.00 ds 0 0 \$0.00 t 0 0 \$0.00 \$0.00 t 0 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 \$0.00	ECO4 TOTAL:	105,840				\$43.92	\$43.92	\$445.54
t t	5 Shower Heads	0			0	\$0.00	\$0.00	\$0.00
t \$0.00 \$0.00 \$0.00 to the solution of the sol								
00.0\$ 00.00 \$0.00	ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
00.0\$ 0 0 0 0	Equipment							
00.0\$ 0 0 0 0 0 0	Related							
0.04 0 0 0 0 0			ļ	,	Ç	0	000	000
	ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

	FY94S FFAP FT KNOX WA	KNOX WA B CONSERVATION STUDY	ON STUDY		1 2
	CALCU			DATE:	31 Oct 94
FACILITY NO.:	1173	FUNCTION:	Post Chapel	je j	
Occupancy:	108 to 250	Operating Hours:	80	ı	
ECO Number ECO Type	System	LPM Retrofited Fixture System LPM Description	n LPM HRS/YR	Fixtures Quantity	Water Leaks Eliminated LPY
1 Lavatory Sinks	у У	17 Spring Loaded Faucets9.5 Spring Loaded Faucets	4.7 130 4.7 130	1	
ECO1 TOTAL:		LPM	LPM	2	0
2 Misc. Sinks					
ECO2 TOTAL:		LPF	LPF #FL/YR	0	0
3 Water Closets	Tank Type (public) 11	11.4 Install 1.6 GPF Tank Type Water Closet	6 4380	2	
ECO3 TOTAL:		LPE	LPF #FL/YR	2	0
4 Urinals					
ECO4 TOTAL:		LPM	LPM HRS/YR	0	0
5 Shower Heads					
ECO5 TOTAL:		ГРМ	LPM	0	0
Equipment Related					
ECO6 TOTAL:				0	0

Systems Engineering and Management Corporation, Knoxville, TN

FACILITY NO.: Water Rate: 0.42 \$/KL Energy Rate: \$/KWH ECO Number Annual Energy Saving LPY LANDIAL Energy Saving LPY Annual Energy Saving LPY Annual Energy Saving LPY Dollar Saving LPY FKW ANNH ANNH Dollar Saving LPY FKW ANNH ANNH Dollar Saving LPY ANNH ANNH <th>FACILITY NO.: 1173 ECO Number</th> <th>0.1</th> <th>5</th> <th>2001</th> <th></th> <th>CALCULATION WORK SHEET 2</th> <th></th> <th></th>	FACILITY NO.: 1173 ECO Number	0.1	5	2001		CALCULATION WORK SHEET 2		
Annual Water Annual Energy Saving WATER Total	ECO Nimber	Water Rate:	0.42	\$/KL		Energy Rate:		#WWH
Saving Py KW KWH MWH Dollar Saving FLEC GAS Saving LOS,105 CAS	ECO Number	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
Saving LPY KW KWH MWH Dollar Saving Saving LPY KW KWH MWH Dollar Saving S43.62 S46.14 S40.65 S46.14 S40.65 S46.14 S40.66 S40.04 S40.04 S40.04 S40.04 S40.00 S60.00		Annual Water	Annual		saving	WATER	Total	Total
105,105	ECO Type		ELEC KW	ELEC	GAS MWH	Dollar Saving	Dollar Saving	Dollars invested
151,710	1	ŏ			0	\$43.62	\$46.14	\$244.80
151,710	Lavatory Sinks	46,605			0	\$19.34	\$20.46	\$244.80
ts	ECO1 TOTAL:	151,710	0	0	0	\$62.96	\$66.60	\$489.60
1	2	0			0	\$0.00	\$0.00	\$0.00
ets 47,304 0 0 0 \$0.00 \$0.00 ets 47,304	Misc. Sinks							
ets 47,304 \$ \$19.63 \$10.00 \$10	ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
1	3	47,304				\$19.63	\$19.63	\$838.32
: 47,304 \$19.63 \$19.63 0 \$0.00 \$0.00 : 0 \$0.00 \$0.00 ids 0 0 \$0.00 : 0 0 \$0.00 : 0 0 \$0.00 it 0 0 \$0.00 : 0 0 \$0.00 : 0 0 \$0.00	Water Closets							
0	ECO3 TOTAL:	47,304				\$19.63	\$19.63	\$838.32
1: 0	4	0				\$0.00	\$0.00	\$0.00
: 0 \$0.00 \$0.00 ads 0 0 \$0.00 : 0 0 \$0.00 it 0 0 \$0.00 : 0 0 \$0.00 : 0 0 \$0.00 : 0 \$0.00 \$0.00	Urinals							
ads 0 0 \$0.00 \$0.00 1	ECO4 TOTAL:	0				\$0.00	\$0.00	\$0.00
it	5	0			0	\$0.00	\$0.00	\$0.00
: 0 0 0 0 \$0.00 \$0.00 i	Snower Heads							
t 0 0 0 \$0.00	ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
00.00\$ 0 0 0 0 0	9							
00.0\$ 00.00 0 0	Equipment							
00.0\$ 00.00 0 0	Related							
00.0\$ 0.00 \$0.00								
	ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

1 2	31 Oct 94			Water Leaks	Eliminated LPY		0		0		0			0		0		0	lle, TN
	DATE:	ilding		Fixtures	Quantity	15	15	m	8	21	21	σ)	6		0		0	ı, Knoxville, TN
TUDY		Training Building	æ		R	130	Person may 4 1, 14	130	#FL/YR	2200	#FL/YR	8580		LPM HRS/YR					orporation
S NOI		- -1	ŀ	Ε	LPM	4.7	LPM	9.2	LPF	13.2	LPF	3 79		LPM		LPM			ment Co
X WA R CONSERVATION STUDY	준	FUNCTION:	Operating Hours:	Retrofited Fixture System	Description	Spring Loaded Faucets		Install Aerators		Install 3.5 GPF Flush Valve Repair Kit		Install 1 0 GPF Flish Valve	1 1						Systems Engineering and Management Corporation,
FY94S EEAP FT. KNOX WA	CALCULATIO	1174	100	e System	Description LPM	Public Lavatory 15	ГРМ	Service Sink 23	LPF	Floor Mounted Flush Valve 17		Wall Mounted Flush Valve 5.68		LPM		MGT			
		FACILITY NO. :	Occupancy:	ECO Number	ECO Type	1 Lavatory Sinks	ECO1 TOTAL:	2 Misc. Sinks	ECO2 TOTAL:	3 Water Closets	FCO3 TOTAL:	V	Urinals	ECO4 TOTAL:	Shower Heads	ECO5 TOTAL:	6 Equipment Related	ECO6 TOTAL:	SYSTEMS CORP

Systems Engineering and Management Corporation, Knoxville, TN

FACILITY NO.: Water Rate: 0.42 \$/K Energy Rate: \$/KWH 1174 Gas Rate: 10.51 \$/MWH Demand Rate: \$/KWH ECO Number Annual Parter Annual Energy Saving WATER Total Total ECO Type Saving LPY KW KWH MWH Dollar Saving Total Signor	Water Rate: 0.42 \$/KL	Rate: 0.42 \$/KL	Rate: 0.42 \$/KL Energy Rate: \$/KW Rate: 10.51 \$/MWH Demand Rate: \$/KW ual Water Annual Energy Saving LPV WATER Total \$/KW ng LPV KWH MWH Dollar Saving \$0.00 \$0.00 \$0.00 42,575 0 0 \$0.00 \$0.00 \$0.00 42,575 0 0 \$0.00 \$0.00 \$0.00 15,900 0 1 \$1.31 \$8.90 \$0.00 15,900 0 1 \$1.31 \$8.90 \$0.00 15,900 0 1 \$1.31 \$8.90 \$0.00 15,900 0 1 \$1.2.86 \$72.86 \$72.86 15,946 \$1.5.946 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 10 0 0 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 10 0 0 0 \$0.00 \$0.00 \$0.00		2	CAI	LCULAT	CULATION WOR		K SHEET 2	2012
Gas Rate: 10.51 \$\text{MWVH}\$ Demand Rate: \$\text{SWV}\$ \$\text{MWVH}\$ \$\text{SAVING}\$ \$\text{MVATER}\$ Total \$\text{FKV}\$ \$\text{MWH}\$ \$\text{Dollar Saving}\$ \$\text{SMS}\$ \$\text{SMS}\$	Rate: 10.51 \$/MWH ual Water Annual Energy & ELEC ELEC	Rate: 10.51 \$/MWH ual Water Annual Energy & ELEC ELEC ELEC ng LPY KW KWH 142,575 0 0 15,900 0 0 15,900 0 0 15,900 0 0 15,946 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Vate: 10.51 \$/MWH val Water Annual Energy CELEC ELEC ELEC <t< th=""><th>FACILITY NO.:</th><th>Water Rate:</th><th>0.42</th><th>\$/KL</th><th></th><th>Energy Rate:</th><th></th><th>\$/KWH</th></t<>	FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
sr Annual Water Annual Energy Saving WATER Total Saving LPY KWH MWH Dollar Saving WATER Total 1,342,575 KWH MWH Dollar Saving S589.42 1,342,575 0 3 \$557.17 \$589.42 315,900 0 1 \$1.31 \$8.90 45,560 0 1 \$1.31 \$8.90 45 175,560 0 1 \$72.86 \$72.86 45,946 \$60.57 \$60.57 \$60.57 \$60.57 6 0 0 \$0.00 \$0.00 \$0.00 6 0 0 \$0.00 \$0.00 \$0.00	ual Water Annual Energy & ELEC ng LPY KW KWH 42,575 0 0 0 42,575 0 0 0 15,900 0 0 0 15,900 0 0 0 15,946 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ual Water Annual Energy & ELEC ng LPY KW KWH 42,575 0 0 0 42,575 0 0 0 15,900 0 0 0 15,900 0 0 0 15,946 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ual Water Annual Energy & ELEC ng LPY KW KWH 42,575 0 0 0 42,575 0 0 0 15,900 0 0 0 15,900 0 0 0 15,946 0 0 0 0 0 0 0 0 0 0 0	} -	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ks ELEC ELEC GAS Dollar Saving Dollar Saving Dollar Saving Dollar Saving Dollar Saving Dollar Saving S589.42 \$589.42 1,342,575 0 0 3 \$557.17 \$589.42 \$500 315,900 0 1 \$1.31 \$8.90 \$8.90 45 175,560 0 1 \$72.86 \$72.86 \$72.86 45 175,560 0 0 \$72.86 \$72.86 \$72.86 45 145,946 0 \$60.57 \$60.57 \$60.57 6 0 \$0.00 \$0.00 \$0.00 \$0.00 6 0 \$0.00 \$0.00 \$0.00 \$0.00 6 0 0 \$0.00 \$0.00 \$0.00	15,900 0 0 0 15,946 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	15,900 0 0 0 15,946 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	142,575 0 142,575 0 15,900 15,900 15,900 15,900 15,900 15,946 0 0 0 0 0 0 0 0 0 0 0 0 0	ECO Number	Annual Water	Annual		Saving	WATER	Total	Total
ks 1,342,575 3 \$557.17 \$589.42 1,342,575 0 0 \$0.00 \$0.00 315,900 0 3 \$557.17 \$589.42 315,900 0 1 \$1.31 \$8.90 45 175,560 0 1 \$72.86 \$72.86 45 175,560 \$72.86 \$72.86 \$72.86 45 145,946 \$60.57 \$60.57 \$60.57 6 0 \$0.00 \$0.00 \$0.00 6 0 \$0.00 \$0.00 \$0.00 7 \$0.00 \$0.00 \$0.00 \$0.00	42,575 0 42,575 0 0 15,900 0 0 15,900 0 0 15,946 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	142,575 0 142,575 0 15,900 15,900 15,900 15,946 15,946 0 0 0 0 0 0 0 0 0 0 0 0 0	142,575 0 142,575 0 15,900 15,900 15,900 15,946 15,946 15,946 0 0 0 0 0 0	ECO Type		ELEC KW		GAS	Dollar Saving	Dollar Saving	Dollars invested
ks 0 \$0.00 \$0.00 1,342,575 0 0 3 \$557.17 \$689.42 315,900 0 1 \$1.31 \$8.90 175,560 0 1 \$1.31 \$8.90 45 175,560 0 1 \$72.86 \$72.86 45 145,946 \$60.57 \$60.57 \$60.57 6 0 0 \$0.00 \$0.00 4 0 \$0.00 \$0.00 6 0 \$0.00 \$0.00 6 0 \$0.00 \$0.00 6 0 \$0.00 \$0.00	0 0 0 0 15,900 0 0 15,900 0 0 15,946 15,946 15,946 0 0 0 0 0 0 0 0 0 0	0 15,900 15,900 0 75,560 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 15,900 0 0 0 15,900 0 0 0 0 15,946 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1	57			3	\$557.17	\$589.42	\$3,672.00
1,342,575 0 0 3 \$557.17 \$589.42 315,900 0 0 1 \$1.31 \$8.90 ts 315,900 0 0 1 \$1.31 \$8.90 ts 175,560 \$72.86 \$72.86 145,946 \$60.57 \$60.57 ds 0 0 0 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 \$0.00	15,900 0 0 15,900 0 0 75,560 0 0 15,946 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	15,900 0 0 15,900 0 0 75,560 0 0 15,946 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	15,900 0 0 15,900 0 0 15,900 0 0 75,560 0 0 15,946 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
s 315,900 1 \$1.31 \$8.90 175,560 0 175,560 \$72.86 \$72.86 ts 175,560 \$72.86 \$72.86 \$72.86 145,946 \$60.57 \$60.57 \$60.57 ds 0 \$0.00 \$0.00 \$0.00 t 0 \$0.00 \$0.00 \$0.00 t 0 \$0.00 \$0.00 \$0.00 t 0 \$0.00 \$0.00 \$0.00	15,900 0 0 0 75,560 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	15,900 15,900 0 0 75,560 15,946 0 0 0 0	15,900 15,900 15,900 0 0 0 0 0 0 0 0 0 0 0	ECO1 TOTAL:	1,342,575	0	0	ဗ	\$557.17	\$589.42	\$3.672.00
s 315,900 0 1 \$1.31 \$8.90 ts 475,560 \$72.86 \$72.86 ts 475,560 \$72.86 \$72.86 145,946 \$60.57 \$60.57 ds 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00	15,900 0 0 75,560 0 0 15,946 0 0 0 0 0 0 0 0 0 0 0	15,900 0 0 0 0 15,946 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	15,900 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2	315,900			_	\$1.31	\$8.90	\$29.09
315,900 0 1 \$1.31 \$8.90 ts 175,560 \$72.86 \$72.86 145,946 \$60.57 \$60.57 t 0 \$0.00 \$0.00	15,900 0 0 0 75,560 t5,946 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	15,900 0 0 0 75,560 15,946 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	15,900 0 0 0 75,560 15,946 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Misc. Sinks							
ts	75,560 45,560 45,946 0 0 0 0 0 0	75,560 45,560 45,946 0 0 0 0 0 0 0	75,560 45,946 0 0 0 0 0 0 0	ECO2 TOTAL:	315,900	0	0	1	\$1.31	\$8.90	\$29.09
ts	75,560 15,946 0 0 0 0 0 0 0	15,560 15,946 0 0 0 0 0 0	75,560 15,946 0 0 0 0 0 0 0	3	175,560				\$72.86	\$72.86	\$1,261.01
175,560 \$72.86 \$72.86 145,946 \$60.57 \$60.57 145,946 0 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 t 0 0 \$0.00 t 0 0 \$0.00 t 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00	15,560 15,946 0 0 0 0 0 0 0	15,946 15,946 0 0 0 0 0 0 0	15,946 0 0 0 0 0 0 0 0	Water Closets							
145,946 \$60.57 \$60.57 145,946 \$60.57 \$60.57 ds 0 \$0.00 \$0.00 t 0 0 \$0.00 t 0 0 \$0.00 t 0 0 \$0.00 t 0 0 \$0.00 t 0 \$0.00 \$0.00	15,946 15,946 0 0 0 0 0 0	15,946 15,946 0 0 0 0 0 0	15,946 0 0 0 0 0 0 0	ECO3 TOTAL:	175,560				\$72.86	\$72.86	\$1,261.01
145,946 \$60.57 \$60.57 ds 0 \$0.00 ds 0 \$0.00 t 0 0 t 0 \$0.00 t 0 \$0.00 t 0 \$0.00	0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	4	145,946				\$60.57	\$60.57	\$572.83
145,946 \$60.57 \$60.57 ds 0 \$0.00 \$0.00 ds 0 0 \$0.00 t 0 0 \$0.00 t 0 0 \$0.00 t 0 0 \$0.00	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Urinals							
ds	0 0 0	0 0 0	0 0 0	ECO4 TOTAL:	145,946				\$60.57	\$60.57	\$572.83
t	0 0 0	0 0 0	0 0 0	5	0			0	\$0.00	\$0.00	\$0.00
t \$0.00 \$0.00 \$0.00 \$0.00 to \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	0 0 0	0 0 0	0 0 0	Shower neads							AND THE RESIDENCE OF THE PROPERTY OF THE PROPE
t 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0	0 0 0	0 0 0	ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
00.0\$ 00.00 0 0	0 0	0 0 0	0 0 0	9 .							
00.0\$ 0 0 0 0	0 0 0	0 0	0 0 0	Equipment						The state of the s	
00.0\$ 0 0 0 0 0	0 0 0	0 0 0	0 0 0	Related						and the second s	
00.0\$ 0.00 0 0 0	0 0 0	0 0 0	0 0 0								
				ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

	FY94S EEAP F1	. KN	F. KNOX WA R CONSERVATION STUDY	SNO	TUDY		1 2
	CALC	SULAT				DATE:	31 Oct 94
FACILITY NO. :	1176		FUNCTION:	·	Chapel Annex	nex	
Occupancy:	25		Operating Hours:				
ECO Number ECO Type	Existing Fixture System Description	LPM	Retrofited Fixture System Description	m LPM	Usage HRS/YR	Fixtures Quantity	Water Leaks Eliminated LPY
1 Lavatory Sinks	Public Lavatory	9.5	Spring Loaded Faucets	4.7	130	2	
ECO1 TOTAL:		LPM		LPM		2	0
2 Misc. Sinks							
ECO2 TOTAL:		LPF		LPF	#FL/YR	0	0
3 Water Closets	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve Repair Kit	13.2	1059	2	
ECO3 TOTAL:		LPF		LPF	#FL/YR	2	0
4 Urinals	Wall Mounted Flush Valve	5.68	Install 1.0 GPF Flush Valve Repair Kit	3.79	1059	~	
ECO4 TOTAL : 5		LPM		LPM	HRS/YR	-	0
Shower Heads ECO5 TOTAL:		LPM		LPM		0	0
Equipment Related							
ECO6 TOTAL:						0	0

Systems Engineering and Management Corporation, Knoxville, TN

7 2 OF 2		\$/KWH	\$/KW	Total	Dollars Invested	\$489.60	\$0.00	\$489.60	\$0.00		\$0.00	\$120.10		\$120.10	\$63.65		\$63.65	\$0.00		\$0.00				\$0.00
FY94S EEAP FT. KNOX WALER CONSERVATION STUDY				Total	Dollar Saving	\$40.92	\$0.00	\$40.92	\$0.00		\$0.00	\$3.34		\$3.34	\$0.83		\$0.83	\$0.00		\$0.00				\$0.00
ER CONSER	CALCULATION WORK SHEET 2	Energy Rate:	Demand Rate:	WATER	Dollar Saving	\$38.68	\$0.00	\$38.68	\$0.00		\$0.00	\$3.34		\$3.34	\$0.83		\$0.83	\$0.00		\$0.00				\$0.00
NOX W	ION NOI			Saving	GAS	0	0	0	0		0							0		0				0
P FT. KN	LCULAT	\$/KL	\$/MWH	Energy 5	ELEC			0			0									0				0
4S EEAF	CA	0.42	10.51	Annual	ELEC			0			0									0				0
FY9		Water Rate:	Gas Rate:	Annual Water	Saving LPY	93,210	0	93,210	0		0	8,048		8,048	2,002		2,002	0		0				0
		FACILITY NO.:		ECO Number	ECO Type	1	Lavatory Sinks	ECO1 TOTAL:	2	Misc. Sinks	ECO2 TOTAL:	3	Water Closets	ECO3 TOTAL:	4	Urinals	ECO4 TOTAL:	2	Shower Heads	ECO5 TOTAL:	9	Equipment	Related	ECO6 TOTAL:

Systems Engineering and Management Corporation, Knoxville, TN

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		<u> </u>		ks	FP.	:		ì									i					
1 02				Water Leaks	Eliminated LPY		0		0			0			0			0			0	
	DATE:			Fixtures	Quantiity	7 2	4		0	ည		က	-		-			0			0	
TUDY		Pool	8		Ξ	130			#FL/YR	2200		#FL/YR	2200		HRS/YR							
S NOI			1	٦	LPM L	4.7	LPM		LPF	9		LPF	3.79		LPM			LPM				
DX WA R CONSERVATION STUDY	CULATION WORK SHEET 1	FUNCTION:	Operating Hours:	Retrofited Fixture System	Spring Caded Equate	Spring Loaded Faucets				Inst. 1.6 GPF Flush Tank	Water Closets		Install 1.0 GPF Flush Valve	Repair Kit								
T. KNC	CULAT			1-1	177 177	9.5	LPM		LPF	11.4		LPF	5.68		LPM			LPM				
FY94S EEAP FT. KNOX WA	CAL	1308	Varies	Existing Fixture System	Description Public I exatent	Public Lavatory				Tank Type (public)			Wall Mounted Flush Valve									
		FACILITY NO. :	Occupancy:	ECO Number	ECO Lype	Lavatory Sinks	ECO1 TOTAL:	2 Misc. Sinks	ECO2 TOTAL:	3	Water Closets	ECO3 TOTAL:	4	Urinals	ECO4 TOTAL:	Should Hoods	Sliower neads	ECO5 TOTAL:	9	Related	ECO6 TOTAL:	

Systems Engineering and Management Corporation, Knoxville, TN

	FY9	FY94S EEAP	_	FT. KNOX W	ER CONSER	ER CONSERVATION STUDY	2 OF 2
		CAI	LCULAT	IOM NOI	LCULATION WORK SHEET 2		
FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ECO Number	Annual Water	Annual	Energy :	Saving	WATER	Total	Total
ECO Type	Saving LPY	ELEC KW	ELEC KWH	GAS	Dollar Saving	Dollar Saving	Dollars Invested
-	210,210			0	\$87.24	\$92.29	\$489.60
Lavatory Sinks	93,210		-	0	\$38.68	\$40.92	\$489.60
ECO1 TOTAL:	303,420	0	0	-	\$125.92	\$133.21	\$979.20
2	0			0	\$0.00	\$0.00	\$0.00
Misc. Sinks							
ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
က	35,640				\$14.79	\$14.79	\$1,257.48
Water Closets							
ECO3 TOTAL:	35,640				\$14.79	\$14.79	\$1,257.48
4	4 158				\$173	\$173	\$63.65
Urinals							
ECO4 TOTAL:	4.158				\$1.73	\$1.73	\$63.65
2	0			0	\$0.00	\$0.00	\$0.00
Shower Heads							
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
9							
Equipment							· · · · · · · · · · · · · · · · · · ·
Related							
					THE PROPERTY WAS AND ADDRESS OF THE PROPERTY O		
ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
CVCTEMS CODE	aau				1		14 - 11: 1/1 1/2 1

SYSTEMS CORP

Systems Engineering and Management Corporation, Knoxville, TN

Coperating Hours: 8 Structified Fixture System Usage Fixtures Water Leaks LPM Description LPM HRS/YR Quantity Eliminated LPY 130 3	FΥ	FY94S EEAP FT. KNOX WA CALCULATION WO	AP FT. KNOX WARE CONSERVATION STUDY CALCULATION WORK SHEET 1	YOU STUDY	DATE:	1 2 31 Oct 94
Retrofited Fixture System Usage Description Fixtures Water Learning Water Learning Loaded Faucets Usage Annutry Fixtures System Water Learning Water Learning Loaded Faucets 4.7 130 3 0 Spring Loaded Faucets 4.7 130 3 0 Install 3.5 GPF Flush Valve 13.2 2200 3 0 Repair Kit LPF #FL/YR 3 0 Install 1.0 GPF Flush Valve 3.79 2200 1 0 Repair Kit LPM HRS/YR 1 0 LPM HRS/YR 1 0 0	1321		FUNCTION:	Latrine		
Retrofited Fixture System Usage Fixtures Water Lea Description LPM HRS/YR Quantity Eliminated Spring Loaded Faucets 4.7 130 3 0 LPM REL/YR 0 0 Install 3.5 GPF Flush Valve 13.2 2200 3 0 Install 1.0 GPF Flush Valve 3.79 2200 1 Repair Kit LPM HRS/YR 1 0 0 LPM HRS/YR 1 0 0 0 0 0 LPM HRS/YR 1 0 0 0			Operating Hours:	80	*	
Spring Loaded Faucets 4.7 130 3 LPM 3 0 Install 3.5 GPF Flush Valve 13.2 2200 3 Install 1.0 GPF Flush Valve 1.79 2200 1 Repair Kit LPM #FL/YR 1 0 Install 1.0 GPF Flush Valve 3.79 2200 1 0 Repair Kit LPM HRS/YR 1 0 LPM HRS/YR 1 0 0	Existing Fixture System Description LPM	5	Retrofited Fixture Description	P.M		Water Leaks Eliminated LPY
LPM 3 0	У				T i	
Install 3.5 GPF Flush Valve 13.2 2200 3 Repair Kit LPF #FL/YR 3 Install 1.0 GPF Flush Valve 3.79 2200 1 Repair Kit LPM HRS/YR 1 LPM HRS/YR 1		Σ		LPM	က	
Install 3.5 GPF Flush Valve 13.2 2200 3 Repair Kit						
Install 3.5 GPF Flush Valve 13.2 2200 3 Repair Kit	LOF	L		-		0
LPF #FL/YR 3 1 1 1 1 1 1 1 1 1	Floor Mounted Flush Valve 17		I		က	
Install 1.0 GPF Flush Valve 3.79 2200 1	LDF	L		_ [10.7	0
LPM HRS/YR 1 LPM 0 0	Wall Mounted Flush Valve 5.68		l			
0	CPN			LPM HRS/Y		0
0 MdJ						
	LPM			ГРМ	0	0
-						
		37-2			0	0

Systems Engineering and Management Corporation, Knoxville, TN

Mater Rate: 0.42 \$/K/L Energy Rate: \$/K/L Gas Rate: 10.51 \$/MWH Demand Rate: \$/K/L Annual Water Saving 15,315 Annual Energy Saving CLPY KW KWH MWH MWH MWH Pollar Saving 138,43 Dollar Saving 138,43 \$/L Saving LPY KW KWH NWH Dollar Saving 0 \$0.00 \$0.00 \$0.00 \$0.00 \$315,315 0 0 \$130.86 \$138.43 \$10.00 \$0 0 \$0.00 \$0.00 \$0.00 \$0.00 \$0 0 \$0.00 \$0.00 \$0.00 \$0.00 \$1,5316 \$1,73 \$1,73 \$1,73 \$1,73 \$4,158 \$1,73 \$1,73 \$1,73 \$1,73 \$0 \$0 \$0.00 \$0.00 \$0.00 \$1 \$1,73 \$1,73 \$1,73 \$1 \$1,73 \$1,73 \$1,73 \$2,00 \$0 \$0.00 \$0.00 \$1 \$1,73 \$1,73 \$1 \$1,73 \$1,73	Water Rate: 0.42 \$/KL Gas Rate: 10.51 \$/MWH Indicate and control of cont			CAI	ALCULAT	CULATION WO	CALCULATION WORK SHEET 2		
Gas Rate: 10.51 \$\text{MWH}\$ Demand Rate: \$\text{Total}\$ \$\text{SMW}\$ Annual Water Annual ELPY KW KWH MWH Dollar Saving Total \$\text{TOTAL}\$ \$auting LPY KW KWH MWH Dollar Saving \$\text{\$130.80}\$ \$\text{\$\$138.43}\$ \$auting LPY KW KWH MWH Dollar Saving \$\text{\$\$130.00}\$ \$\text{\$\$0.00}\$ \$auting \$\text{\$\$0.00}\$ \$\text{\$\$0.00}\$ \$\text{\$\$0.00}\$ \$\text{\$\$0.00}\$ \$\text{\$\$0.00}\$ \$auting \$\text{\$\$0.00}\$ \$\text{\$\$0.00}\$ \$\text{\$\$0.00}\$ \$\text{\$\$0.00}\$ \$auting \$\text{\$\$10.41}\$ \$\text{\$\$10.41}\$ \$\text{\$\$10.41}\$ \$auting \$\text{\$\$10.41}\$ \$\text{\$\$10.41}\$ \$\text{\$\$10.41}\$ \$auting \$\text{\$\$10.41}\$ \$\text{\$\$10.41}\$ \$\text{\$\$10.41}\$ \$auting \$\text{\$\$10.41}\$ \$\text{\$\$10.41}\$ \$\text{\$\$10.41}\$ \$auting \$\text{\$\$10.21}\$ \$\text{\$\$10.41}\$ \$\text{\$\$10.00}\$ \$auting \$\$\$1.73	late: 10.51 \$/MWH all below with the state of the state o	FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
Saving LPY KWH MWH Dollar Saving Saving LEC ELEC GAS 315,315	1al Water Annual Energy S 15,315	- 4	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ks ELEC ELEC GAS Dollar Saving Public Saving <th>15,315 ELEC ELEC ELEC 5,315 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0</th> <th>ECO Number</th> <th>Annual Water</th> <th>Annua</th> <th></th> <th>Saving</th> <th>WATER</th> <th>Total</th> <th>Total</th>	15,315 ELEC ELEC ELEC 5,315 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ECO Number	Annual Water	Annua		Saving	WATER	Total	Total
Krs 315,315 1 \$130.86 \$138.43 1 0 \$0.00 \$0.00 1 \$130.86 \$138.43 1 \$0 0 \$0.00 1 \$0 0 \$0.00 1 \$0 \$0.00 \$0.00 1 \$10.41 \$10.41 1 \$10.41 \$10.41 1 \$1.73 \$1.73 2 \$1.73 \$1.73 2 \$0 \$0 \$0.00 3 \$0.00 \$0.00 1 \$0.00 \$0.00 2 \$0.00 \$0.00 3 \$0.00 \$0.00 3 \$0.00 \$0.00	5,315 0 0 0 0 0 0,0 0 0,158 0 0 0 0 0 0 0 0 0 0 0 0 0	ECO Type		ELEC KW	ELEC WH	GAS	Dollar Saving	Dollar Saving	Dollars Invested
ks 0 \$0.00 \$0.00 strain \$130.86 \$138.43 strain \$0.00 \$0.00 strain \$0.00 \$0.00 strain \$10.41 \$10.41 strain \$10.41 \$10.41 strain \$10.41 \$10.41 strain \$10.41 \$10.41 strain \$1.73 \$1.73 strain \$0.00 \$0.00 \$0.00 strain \$0.00 \$0.00 \$0.00 strain \$0.00 \$0.00 \$0.00 strain \$0.00 \$0.00 \$0.00	5,315 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		7			_	\$130.86	\$138.43	\$734.40
115,315 0 0 1 \$130.86 \$138.43	5,315 0 0 4130.86 \$138.43 0 0 0 \$0.00 \$0.00 0 0 0 \$0.00 \$0.00 5,080 \$10.41 \$10.41 \$10.41 5,080 \$1.73 \$1.73 \$1.73 1,158 \$1.73 \$1.73 \$1.73 0 0 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 \$0.00 0 0 \$0.00 \$0.00 \$0.00 Systems Engineering and Management Corporation,	Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
0	0 0 0 0 5,080 5,080 0 0 0 0 0 0 0 0	ECO1 TOTAL:	315,315	0	0	-	\$130.86	\$138.43	\$734.40
15.	0 0 0 0 5,080 5,080 6,158 0 0 0 0	2	0			0	\$0.00	\$0.00	\$0.00
10 0 0 \$0.00 \$0.00 25,080 \$10.41 \$10.41 25,080 \$10.41 \$10.41 4,158 \$1.73 \$1.73 4,158 \$0.00 \$0.00 15 0 \$0.00 16 0 \$0.00 17 \$0.00 \$0.00 18 \$0.00 \$0.00 19 0 \$0.00 \$0.00 10 0 \$0.00 \$0.00	0 0 0 0 5,080 5,080 6,158 0 0 0 0	Misc. Sinks							
ts \$10.41 \$10.41 25,080 \$10.41 \$10.41 4,158 \$1.73 \$1.73 4,158 \$1.73 \$1.73 4,158 \$1.73 \$1.73 4,158 \$1.73 \$1.73 0 \$0.00 \$0.00 4s \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00	5,080 5,080 1,158 0 0 0 0 0 0 0	ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
ts \$10.41 \$10.41 25,080 \$1.73 \$1.73 4,158 \$1.73 \$1.73 4,158 \$1.73 \$1.73 0 0 \$0.00 4s 0 0 \$0.00 0 0 \$0.00 \$0.00 0 0 \$0.00 \$0.00 0 0 \$0.00 \$0.00	5,080 1,158 0 0 0 0 0 0 0	3	25,080				\$10.41	\$10.41	\$180.14
25,080 \$10.41 \$10.41 4,158 \$1.73 \$1.73 4,158 \$0 \$0.00 4s 0 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00	5,080 1,158 0 0 0 0 0 0 0	Water Closets							
4,158 \$1.73 \$1.73 \$1.73 4,158 \$1.73 \$1.73 0 0 \$0.00 \$0.00 1s 0 0 \$0.00 0 0 0 \$0.00 : 0 0 \$0.00 : 0 0 \$0.00	1.158 0 0 0 0 0 0 0 0	ECO3 TOTAL:	25,080				\$10.41	\$10.41	\$180.14
4,158 \$1.73 \$1.73 0 0 \$0.00 1s 0 0 0 0 \$0.00 : 0 0 0 0 \$0.00	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	4	4,158				\$1.73	\$1.73	\$63.65
4,158 \$1.73 \$1.73 \$1.73 0 0 \$0.00 \$0.00 1s 0 0 \$0.00 0 0 0 \$0.00 : 0 0 \$0.00 0 0 0 \$0.00	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Urinals							
Correction	0 0 0	ECO4 TOTAL:	4,158				\$1.73	\$1.73	\$63.65
00.00\$ 00.00\$ \$0.00	0 0 0	5	0			0	\$0.00	\$0.00	\$0.00
00.0\$ 00.0\$ 0 0 0 0	0 0 0	Snower Heads							
00.0\$ 00.00 0 0	0 0 0	ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
00.0\$ 00.00 0 0	0 0	9							
00.0\$ 0 0 0 0	0 0	Equipment	Company and the Company of the Compa						
00.0\$ 0 0 0 0 0	0 0	Kelated							
00.0\$ 0.00 0 0 0	0								
		ECO6 TOTAL:	- 1	0	0		\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

2	t 94			Leaks	ted LPY																					
1	31 Oct 94			Water Leaks	Eliminated LPY			0			0			0				Ì			٦		-		0	
	DATE:			Fixtures	Quantity	4	-	5	2		2	5		2	3		٣			ļ	0				0	
TUDY		Post Office	80	Usage	HRS/YR	130	130	1. At	130		#FL/YR	1500		#FL/YR	6240		HRSWR									
S NOI		-	ı	L L	LPM	4.7	4.7	LPM	9.5		LPF	13.2		LPF	3.79		20				ך ב					
X WA R CONSERVATION STUDY	坙	FUNCTION:	Operating Hours:	Retrofited Fixture System	Description	Spring Loaded Faucets	Spring Loaded Faucets		Install Aerators			Install 3.5 GPF Flush Valve	Repair Kit		Install 1.0 GPF Flush Valve	Repair Kit										
r. KNC	CULATI				LPM	17	9.5	L P M	45		LPF	17		LPF	5.68		MO				E E					
FY94S EEAP FT. KNOX WA	CAL	1359	25	Existing Fixture System		Public Lavatory	Public Lavatory		Service Sink			Floor Mounted Flush Valve			Wall Mounted Flush Valve											
		FACILITY NO. :	Occupancy:	ECO Number	ECO Type	1	Lavatory Sinks	ECO1 TOTAL:	2	Misc. Sinks	ECO2 TOTAL:	3	Water Closets	ECO3 TOTAL:	4	Urinals	FCO4 TOTAL	5	Shower Heads	TATOL JOOL	ECUS IOIAL:	Fairinment	Related	500	ECO6 TOTAL:	

Systems Engineering and Management Corporation, Knoxville, TN

Mater Rate: 0.42 \$/KL Energy Rate: \$/KV Gas Rate: 10.51 \$/MVVH Demand Rate: \$/KV Annual Water Saving Acold 20 Acol	Water Rate: 0.42 \$/KL Energy Rate: \$/KV	Water Rate: 0.42 \$/KL F Gas Rate: 10.51 \$/MWH D T Annual Water Annual ELEC GAS Saving LPY KWH KWH MWH 420,420 C 0 1 1 46,605 0 0 1 1 553,800 0 0 1 1 28,500 0 0 1 1 28,500 0 0 1 1 28,500 0 0 1 0 28,500 0 0 0 0 35,381 0 0 0 0 0 0 0 0 0 1 0 0 0 0 28,5381 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	\$/KV \$/KV Total Dollar Saving	
Gas Rate: 10.51 \$MMVH Demand Rate: \$MKW \$MMVH Demand Rate: \$MKW Demand Rate: \$MKW \$MKW Demand Rate: \$MKW Demand Rate: \$MKW \$MKW Demand Rate: \$MKW Popular Saving Demand Rate: \$MKW Popular Saving \$MKW Popular Saving<	Lal Water Annual Energy Substituting LPY KW KWH CO,420 CO,	Cas Rate: 10.51 \$/MWH December Annual Water Annual Energy Saving ELEC ELEC GAS G	\$/KV Total Dollar Saving	I
Saving LEC ELEC GAS Saving WATER Total	131 Water Annual Energy Structure	Annual Water Annual Energy Saving ELEC ELEC GAS	Total Dollar Saving	
ks ELEC AGAS AVING LPY KWH KWH AWH AWH AVIOLATO ELEC ALEC GAS AVING ALEAT ELEC ALEC GAS AVING	10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Saving LPY KW KWH MWH 420,420 1	Dollar Saving \$184.57	Total
ks 420,420 1 \$174.47 \$184.57 ks 46,605 0 \$19.34 \$20.46 s 467,025 0 1 \$193.82 \$20.60 s 553,800 0 1 \$2.30 \$15.60 ts 28,500 0 1 \$2.30 \$11.83 ts 28,500 0 \$11.83 \$11.83 ts 28,500 \$14.68 \$14.68 ts 0 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 ts 0 \$0.00 \$0.00	6,605 6,605 6,605 63,800 8,500 0 0 0 0 0 0 0 0 0 0 0	420,420 1 46,605 0 467,025 0 0 553,800 0 0 553,800 0 1 28,500 0 0 35,381 0 0 ds 0 0 0 t 0 0 0 t 0 0 0	\$184.57	ollars invested
ks 46,605 0 \$19.34 \$20.46 467,025 0 0 1 \$193.82 \$205.04 553,800 0 0 1 \$2.30 \$15.60 467,025 0 0 1 \$2.30 \$15.60 553,800 0 0 1 \$2.30 \$15.60 45 28,500 0 \$11.83 \$11.83 45 35,381 \$14.68 \$14.68 50 \$0.00 \$0.00 \$0.00 48 0 \$0.00 \$0.00 50 \$0.00 \$0.00 \$0.00 60 \$0.00 \$0.00 \$0.00 80 \$0.00 \$0.00 \$0.00	6,605 6,605 6,502 6,380 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Ks 46,605 0 0 1 1 1 1 1 1 1 1		\$979.20
467,025 0 0 1 \$193.82 \$205.04 553,800 0 1 \$2.30 \$15.60 28,500 0 1 \$2.30 \$16.60 28,500 0 1 \$11.83 \$11.83 35,381 \$14.68 \$14.68 \$14.68 35,381 0 \$0.00 \$0.00 4s 0 \$0.00 \$0.00 6 0 \$0.00 \$0.00 8 \$0.00 \$0.00 \$0.00	53,800 0 0 53,800 0 0 8,500 0 0 5,381 0 0 0 0 0 0 0 0 0 0 0	467,025 0 0 1 553,800 0 0 1 28,500 0 0 1 28,500 0 0 0 35,381 0 0 ds 0 0 0 0	\$20.46	\$244.80
553,800 1 \$2.30 \$15.60 553,800 0 1 \$2.30 \$15.60 28,500 0 1 \$2.30 \$11.83 28,500 \$11.83 \$11.83 \$11.83 35,381 \$14.68 \$14.68 \$14.68 0 0 \$0.00 \$0.00 4s 0 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 1 \$0 \$0.00 \$0.00 1 \$0.00 \$0.00 \$0.00	53,800 63,800 6,500 6,381 0 0 0 0 0 0 0 0 0	553,800	\$205.04	\$1.224.00
553,800 0 1 \$2.30 \$15.60 28,500 0 1 \$11.83 \$11.83 28,500 \$11.83 \$11.83 \$11.83 35,381 \$14.68 \$14.68 \$14.68 0 0 \$0.00 \$0.00 1s 0 \$0.00 \$0.00	8,500 0 0 8,500 0 0 5,381 0 0 0 0 0 0 0 0 0 0 0	553,800 0 0 1 28,500 35,381 0 0 0 0 0 15,381 16 17 18 18 19 19 19 19 19 19 19 19 19 19 19 19 19	\$15.60	\$19.39
553,800 0 1 \$2.30 \$15.60 28,500 \$11.83 \$11.83 28,500 \$11.83 \$11.83 35,381 \$14.68 \$14.68 35,381 \$0 \$0.00 4s 0 \$0.00 1c \$0 \$0.00 1c \$0 \$0.00 1c \$0 \$0.00 1c \$0 \$0.00 1c \$0.00 \$0.00 1c \$0.00 \$0.00	8,500 8,500 5,381 0 0 0 0 0 0 0 0	553,800 0 0 1 28,500 35,381 0 0 35,381 0 0 0 ds 0 0 0 t t 0 0		
ts	8,500 8,500 5,381 0 0 0 0 0	28,500	\$15.60	\$19.39
ts 28,500	8,500 5,381 0 0 0 0 0 0 0 0 0 0	28,500 35,381 35,381 0 0 0 0 0 t	\$11.83	\$300.24
28,500 \$11.83 \$11.83 35,381 \$14.68 \$14.68 35,384 \$0 \$0.00 \$0.00 4s 0 \$0.00 \$0.00 0 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00	8,500 5,381 0 0 0 0 0 0 0 0	28,500 35,381 35,381 0 0 0 ds 0 0 0		
35,381	5,381 5,381 0 0 0 0 0	35,381 35,381 0 0 0 0 0 t	\$11.83	\$300.24
35,381 \$14.68 \$14.68 \$10.00 ds \$0.00	5,381 0 0 0 0 0 0	35,381 0 0 0 ds 0 0 0 0	\$14.68	\$190.94
35,381 \$14.68 \$14.68 0 \$0.00 \$0.00 ds 0 0 \$0.00 t 0 0 \$0.00 t 0 0 \$0.00 t 0 0 \$0.00	5,381 0 0 0 0 0 0	35,381 0 0 0 ds 0 0 0 0		
Correction	0 0 0	ds 0 0 0 0 t	\$14.68	\$190.94
00.0\$ 00.00 \$0.00	0 0 0	0 0 0	\$0.00	\$0.00
00.0\$ 00.00 0 0 0	0 0 0	0 0 0 0		
00.08 00.00 0 0	0 0 0		\$0.00	\$0.00
00.0\$ 00.00 0 0	0 0 0	Equipment Related		
00.0\$ 0 0 0 0	0 0 0	Related		
00.0\$ 0 0 0 0 0	0 0 0			
00.0\$ 0.00\$ 0 0 0 0	0 0 0			
		0 0 0 0	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

	FY94S EEAP FT	r. KNC	FY94S EEAP FT. KNOX WER CONSERVATION STUDY	S NOI	TUDY		7
	CALC	SULAT	LCULATION WORK SHEET 1			DATE:	31 Oct 94
FACILITY NO. :	1392		FUNCTION:	- ,	Officers Quarters	uarters	
Occupancy:	20		Operating Hours:	'	24		
ECO Number	Existing Fixture System	i 1	Retrofited Fixture System	Ε	Usage	Fixtures	Water Leaks
ECO Type	Description	LPM	Description	LPM	HRS/YR	Quantity	Eliminated LPY
1 I avatory Sinks	Public Lavatory	9.5	Spring Loaded Faucets	4.7	130	16	
Lavaiory Silling							
ECO1 TOTAL:		LPM		LPM		16	0
2		,					
Misc. Sinks							
FCO2 TOTAL:		PE		- PF	#FI MR	c	c
3		17	Install 3.5 GPF Flush Valve	132	1825	15	
Water Closets			Repair Kit	!)	
ECO3 TOTAL .		ם		- -	#E! ND		C
ECO3 10 I AL .		1		7	#FLLYR	CI.	0
4 Urinals						-	
ECO4 TOTAL:		LPM		LPM	HRS/YR	0	0
5							
Shower Heads							
ECO5 TOTAL:		LPM		LPM		0	0
9							
Equipment							
Related							
ECO6 TOTAL:				### ### ###		0	0

Systems Engineering and Management Corporation, Knoxville, TN

	FY9	EV94S EFAP	1 -	W XON	ER CONSER	ET KNOX W FR CONSERVATION STUDY	2 OF 2
		CAI		IOM WOI	CULATION WORK SHEET 2		
FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
766	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ECO Number	Annual Water	Annual	Energy	Saving	WATER	Total	Total
ECO Type	Saving LPY	ELEC KW	ELEC KWH	GAS MWH	Dollar Saving	Dollar Saving	Dollars invested
_	86			2	\$309.46	\$327.37	\$3,916.80
Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
ECO1 TOTAL:	745,680	0	0	2	\$309.46	\$327.37	\$3,916.80
2	0			0	\$0.00	\$0.00	\$0.00
Misc. Sinks							
ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
3	104,025				\$43.17	\$43.17	\$900.72
Water Closets							
ECO3 TOTAL:	104.025				\$43.17	\$43.17	\$900.72
4	0				\$0.00	\$0.00	\$0.00
Urinals							
ECO4 TOTAL:	0				\$0.00	\$0.00	\$0.00
5	0			0	\$0.00	\$0.00	\$0.00
Snower neads							
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
9							
Equipment							
Related							
ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

	FY94S EEAP FI	T. KN	KNOX V TER CONSERVATION STUDY	S NO	TUDY	,	JF 2
	CAL	CULAT	CALCULATION WORK SHEET 1			DATE:	31 Oct 94
FACILITY NO. :	1393		FUNCTION:	,	Officers Quarters	uarters	
Occupancy:	15		Operating Hours:	·	24		
ECO Number	Existing Fixture System		Retrofited Fixture System	٤	Usage	Fixtures	Water Leaks
ECO Type	Description	LPM	Description	LPM	HRS/YR	Quantity	Eliminated LPY
1	Public Lavatory	9.5	Spring Loaded Faucets	4.7	130	16	
Lavatory Sinks							
FCO1 TOTAL:		-7	LPM	LPM		16	0
2		-					
Misc. Sinks							
ECO2 TOTAL:	**************************************	_	LPFy San State Control of the San	LPF	#FL/YR		0
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	1825	16	
Water Closets			, Repair Kit				
		—┡					
ECO3 TOTAL:	The second second second second		SLPF的多种的学生。 See See See See See See See See See Se	LPF	#FL/YK	٩	>
4							
Urinals							
- 10 TOT 10 S		—I —	Section Section 1997	Wd	HRSWR	6	0
ECO4 101AL.							
Shower Heads							
ECOS TOTAL:	AND THE BURE PER SERVICE	LPM SEE	1955 1953 1955 1955 1955 1955 1955 1955	LPM	建棉装气	0	0
9							
Equipment							
Related							
	The state of the s	7	The state of the s	11 - 46.52	网络线线加拿大	 -	c
ECOG TOTAL:	The second secon	11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1.6.1		で映像なった。これ		

SYSTEMS CORP

Systems Engineering and Management Corporation, Knoxville, TN

	FY9	FY94S FFAP		FT KNOX WA		R CONSERVATION STIINY	2062
		CAI	ALCULAT	ION MOI	X		
FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ECO Number	Annual Water	Annual	Energy	Saving	WATER	Total	Total
ECO Type	Saving LPY	ELEC	ELEC	GAS	Dollar Saving	Dollar Saving	Dollars Invested
	745,680			2	\$309.46	\$327.37	\$3,916.80
Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
ECO1 TOTAL:	745,680	0	0	2	\$309.46	\$327.37	\$3,916.80
2	0			0	\$0.00	\$0.00	\$0.00
Misc. Sinks							
ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
3	110,960				\$46.05	\$46.05	\$960.77
Water Closets							
ECO3 TOTAL:	110,960				\$46.05	\$46.05	\$960.77
4	0				\$0.00	\$0.00	\$0.00
Urinals							
ECO4 TOTAL:	0				\$0.00	\$0.00	\$0.00
5	0			0	\$0.00	\$0.00	\$0.00
Shower Heads							
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
9							
Equipment		·					
Related							
ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

	FY94S EEAP F	T. KN	FT. KNOX WA R CONSERVATION STUDY	S NO	TUDY		1 2
	CAL	CULAT	LCULATION WORK SHEET 1			DATE:	31 Oct 94
FACILITY NO.:	1467		FUNCTION:	ı	Enlisted Barracks	arracks	
Occupancy:	200		Operating Hours:	ı	15		
ECO Number	Existing Fixture System	Md	Retrofited Fixture System	n Md	Usage HPS/VP	Fixtures	Water Leaks
1	Public Lavatory	9.5	Spring Loaded Faucets	4 7	730	24 LILLY	רווווווווווווווווווווווווווווווווווווו
Lavatory Sinks						1	
ECO1 TOTAL:		LPM		LPM	1. av	24	0
2	Laundry Sink	23	Install Aerators	9.5	2080	8	
Misc. Sinks							
ECO2 TOTAL:		LPF		LPF	#FL/YR	8	0
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	11526	38	
Water Closets			Repair Kit				
FCO3 TOTAL		3d		1d	#FI WR	38	C
			7	- C			
4 Hrinals	wall Mounted Flush Valve	5.08	Install 1.0 GPF Flush Valve	3.79	72000	7	
ECO4 TOTAL:		LPM	· · · · · · · · · · · · · · · · · · ·	LPM	HRS/YR	2	0
5							
Shower Heads							
ECO5 TOTAL:		LPM		LPM		0	0
9							
Equipment							
Related							
ECO6 TOTAL:						0	0

Systems Engineering and Management Corporation, Knoxville, TN

	FY9	FY94S FFAP		ET KNOX W		P CONSERVATION STIINY	2 0 0 0 2
		CAL		FION WO	ואמוו		7 10 2
FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
-	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ECO Number	Annual Water	Annua	Annual Energy	Saving	WATER	Total	Total
ECO Type	Saving LPY	ELEC KW	ELEC KWH	GAS	Dollar Saving	Dollar Saving	Dollars invested
Ψ	6,280,920			14	\$2,606.58	\$2,757.47	\$5,875.20
Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
ECO1 TOTAL:	6,280,920	0	0	14	\$2,606.58	\$2,757.47	\$5.875.20
2	13,478,400			31	\$55.94	\$379.74	\$77.57
Misc. Sinks							
ECO2 TOTAL:	13,478,400	0	0	31	\$55.94	\$379.74	\$77.57
က	1,664,354				\$690.71	\$690.71	\$2,281,82
Water Closets							
ECO3 TOTAL:	1,664,354				\$690.71	\$690.71	\$2.281.82
4	94,500				\$39.22	\$39.22	\$127.30
Urinals							
ECO4 TOTAL:	94,500				\$39.22	\$39.22	\$127.30
5	0			0	\$0.00	\$0.00	\$0.00
Shower Heads							
ECO5 TOTAL:	0	0	0	0	\$0.00	80.00	00.08
9							
Equipment							
Related							
ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
SYSTEMS CORP	ORP			Systems	Engineering and	d Management Corp	Systems Engineering and Management Corporation, Knoxville, TN

Systems Engineering and Management Corporation, Knoxville, TN

	FY94S EEAP F	T. K	FY94S EEAP FT. KNOX WARER CONSERVATION STUDY	S NO	TUDY		102
	CALC	SULAT	CALCULATION WORK SHEET 1			DATE:	31 Oct 94
FACILITY NO. :	1468		FUNCTION:	'	Enlisted Barracks	arracks	
Occupancy:	120		Operating Hours:	'	24		
ECO Number	Existing Fixture System	1 1	Retrofited Fixture System	Е	Usage	Fixtures	Water Leaks
ECO Type	Description	LPM	Description	LPM	HRS/YR	Quantity	Eliminated LPY
	Public Lavatory	9.5	Spring Loaded Faucets	4.7	730	16	
Lavatory Sinks							
ECO1 TOTAL:		LPM		LPM		16	0
2	Laundry Sink	32	Install Aerators	9.6	2080	80	
Misc. Sinks							
ECO2 TOTAL:		LPF		LPF	#FL/YR	8	0
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	8000	16	
Water Closets			Repair Kit				
ECO3 TOTAL:		LPF	《《《··································	LPF	#FL/YR	16	0
4	Wall Mounted Flush Valve	5.68	Install 1.0 GPF Flush Valve	3.79	20000	6	
Urinals			Repair Kit				
ECO4 TOTAL:		LPM		LPM	HRS/YR	6	0
2							
Shower Heads							
TATOL JOOL		110					
ECOS TOTAL:		LL		LT		0	0
ا و							
Equipment							
Related							
ECO6 TOTAL:		1 2 2 2 3 3 4		1.00 4.00 1.31		0	0
)	

Systems Engineering and Management Corporation, Knoxville, TN

	FΥ9	FY94S EEAP FT. KNOX W	P FT. KI	MOX W		FR CONSERVATION STUDY	2 OF 2
		73	ILCULAT	ION MOI	CALCULATION WORK SHEET 2		
FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ECO Number	Annual Water	Annua	Annual Energy Saving	Saving	WATER	Total	Total
ECO Type	Saving LPY	ELEC KW	ELEC KWH	GAS MWH	Dollar Saving	Dollar Saving	Dollars invested
_	28			10	\$1,737.72	\$1,838.32	\$3,916.80
Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
ECO1 TOTAL:	4.187.280	0	0	10	\$1,737,72	\$1,838,32	\$3.916.80
2	22,464,000			51	\$93.23	\$632.90	\$77.57
Misc. Sinks							
ECO2 TOTAL:	22,464,000	0	0	51	\$93.23	\$632.90	\$77.57
က	486.400				\$201.86	\$201.86	22 0988
Water Closets							
ECO3 TOTAL:	486,400				\$201.86	\$201.86	\$960.77
4	340,200				\$141.18	\$141.18	\$572.83
Urinals							
ECO4 TOTAL:	340,200				\$141.18	\$141.18	\$572.83
5	0			0	\$0.00	\$0.00	\$0.00
Shower Heads							
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
9							
Equipment							
Related							
ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
SYSTEMS CORP	ORP			Systems	Engineering and	Systems Engineering and Management Corporation,	poration, Knoxville, TN

Systems Engineering and Management Corporation, Knoxville, TN

	FY94S EEAP FT		KNOX WARK CONSERVATION STUDY	S NOI	TUDY		-
	CAL	CULAT	CALCULATION WORK SHEET 1			DATE:	31 Oct 94
FACILITY NO. :	1487		FUNCTION:	. ,	Training Building	uilding	
Occupancy:			Operating Hours:	,	6	,	
ECO Number	Existing Fixture System	r MG I	Retrofited Fixture System	n DM	Usage	Fixtures	Water Leaks
1	Public Lavatory	17	Spring Loaded Faucets	4.7	130	3	Ellilliated Lr
Lavatory Sillins							
ECO1 TOTAL:		LPM		LPM		3	0
2	Service Sink	17	Install Aerators	9.5	130	-	= d - (1 to 100 to 10 to
Misc. Sinks							3 1
ECO2 TOTAL:		LPF		LPF	#FL/YR		0
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	2200	3	
Water Closets			Repair Kit				
ECO3 TOTAL:		LPF		LPF	#FL/YR	က	0
4	Wall Mounted Flush Valve	5.68	Install 1.0 GPF Flush Valve	3.79	8580	2	
Urinals			Repair Kit				
ECO4 101AL:		Z Z		Lym	LPM HKS/YK	2	0
Shower Heads							
ECO5 TOTAL:		PM		Md		c	C
9						,	
Equipment							
Related							
ECO6 TOTAL:						0	0

Systems Engineering and Management Corporation, Knoxville, TN

	FY9	FY94S EEAP		FT. KNOX W		FER CONSERVATION STUDY	2 OF 2
		3	ALCULA	TION WOI	CALCULATION WORK SHEET 2		
FACILITY NO. : 1487	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ECO Number	Annual Water	Annual	Energy	Saving	WATER	Total	Total
ECO Type	Saving LPY	ELEC	ELEC KWH	GAS	Dollar Saving	Dollar Saving	Dollars Invested
4-	E			0	\$130.86	\$130.86	\$734.40
Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
ECO1 TOTAL:	315,315	0	0	0	\$130.86	\$130.86	\$734.40
2	58,500			0	\$0.24	\$1.65	\$9.70
Misc. Sinks							
ECO2 TOTAL:	58,500	0	0	0	\$0.24	\$1.65	\$9.70
က	25,080				\$10.41	\$10.41	\$180.14
Water Closets							
ECO3 TOTAL:	25,080				\$10.41	\$10.41	\$180.14
4	32,432				\$13.46	\$13.46	\$127.30
Urinals							
ECO4 TOTAL:	32,432				\$13.46	\$13.46	\$127.30
5	0			0	\$0.00	\$0.00	\$0.00
Shower Heads							
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
9	4.						
Equipment							
Related							
ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

	THE CARE FEAD FT	K	T KNOX W & CONSERVATION STILLY	NO.	אַנוֹ וֹטַּ		•
	CALC	ULAT	$LI \cap I$			DATE:	29 Oct 94
FACILITY NO. :	1531		FUNCTION:	-,	Maintenance	9	
Occupancy:			Operating Hours:	'	ω	·	
ECO Number	Existing Fixture System		Retrofited Fixture System	ш	Usage	Fixtures	Water Leaks
ECO Type		LPM	Description	LPM	HRS/YR	Quantity	Eliminated LPY
	Public Lavatory	9.5	Spring Loaded Faucets	4.7	730	2	
Lavatory Sinks	ý	22.7	Spring Loaded Faucets	4.7	730	~-	
ECO1 TOTAL:		LPM		LPM		3	0
2							0
Misc. Sinks							
ECO2 TOTAL:		LPF		LPF	#FL/YR		0
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	18250	2	
Water Closets			Repair Kit				
TOTS TOTAL	・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・	D D		100	מאַ ואַם		
ECOS TOTAL:		רקק			#FLJTR	7	
4 Hrinale							
Significant							
ECO4 TOTAL:		LPM		LPM	HRS/YR	0	0
2							0
Shower Heads							
COS TOTAL .		MQ -		I DIM		c	c
		1					
Fauinment							
Related							
ECO6 TOTAL:	· · · · · · · · · · · · · · · · · · ·	W W W	のでは、これでは、10mmの対象が変化を変化されません。 マーティー・ラス			0	0

Systems Engineering and Management Corporation, Knoxville, TN

FACILITY NO.: Water Rate: 0.42 \$/K/L Energy Rate: \$/K/WH 1631 Gas Rate: 10.51 \$/M/MH Demand Rate: \$/K/WH ECO Numbor Annual Energy Saving WATER Total Total ECO Numbor Annual LpY KWH MWH Dollar Saving Dollar Saving Dollar Saving ECO Type Saving LpY KWH MWH Dollar Saving Dollar Saving Dollar Saving ECO TOTAL: 523.410 3 \$566.576 \$580.72 \$248.80 Lavatory Sinks 0 0 0 \$0.00 \$0.00 \$0.00 ECOT TOTAL: 1,363,275 0 0 \$0.00 \$0.00 \$0.00 ECOZ TOTAL: 0 0 0 \$0.00 \$0.00 \$0.00 \$0.00 ECOZ TOTAL: 0 0 0 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 ECOZ TOTAL: 0 0 0 \$0.00 \$0.00 \$0.00<	Case Rate: 10.51 S/MVH Demand Rate: S/MVH Saving LPY ELEC ELEC GAS Dollar Saving LPY KW KWH MWH Dollar Saving S23,1.05 S23,1	Rate: 0.42 \$/KL sate: 10.51 \$/MWH all water Annual Energy and LPY KW KWH 23,410 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			CALCULATION WO	LCULAT	ION WO	LCULATION WORK SHEET 2	K SHEET 2	
ber Annual Water Annual Energy Annual Energy Saving ELEC WATER Total \$/KW be Saving LPY KWH MWH Dollar Saving ANTER Total Total \$/KW inks 523,410 1 \$217,22 \$231,05 \$231,05 \$/KW \$/KWH MWH Dollar Saving ANTER Dollar Saving ANTER Dollar Saving ANTER \$/KWH \$/KWH MWH Dollar Saving ANTER \$/KWH	Rate: 10.51 \$/MWH ual Water Annual Energy ELEC ELEC <th< th=""><th>Rate: 10.51 \$/MWH ual Water Annual Energy ng LPY KW KWH 23,410 0 0 39,865 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0</th><th></th><th>Water Rate:</th><th>0.42</th><th>\$/KL</th><th></th><th>Energy Rate:</th><th></th><th>\$/KWH</th></th<>	Rate: 10.51 \$/MWH ual Water Annual Energy ng LPY KW KWH 23,410 0 0 39,865 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
ber Annual Water Annual Energy Saving WATER Total be Saving LEC ELEC GAS Dollar Saving Pollar Saving c 523,410 1 \$217.22 \$231.05 inks 839,865 2 \$348.54 \$586.72 c 0 0 0 \$0.00 \$0.00 L: 1,363,275 0 0 \$0.00 \$0.00 L: 0 0 0 \$0.00 \$0.00 \$0.00 ks 0 0 0 \$0.00 \$0.00 \$0.00 L: 0 0 0 \$0.00 \$0.00 \$0.00 cs 0 0 \$0.00 \$0.00 \$0.00	ual Water Annual Energy & RWH ng LPY KW KWH 23,410 0 0 39,865 0 0 0 0 0	ual Water Annual Energy & KW ng LPY KW KWH 23,410 0 0 39,865 0 0 0 0 0<		Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
Seving LPY KW KWH MWH Dollar Saving Dollar Saving Dollar Saving Dollar Saving Dollar Saving Dollar Saving ELEC ELEC ELEC GAS ASS A	ng LPY KW KWH 23,410 0 0 39,865 0 0 0	ng LPY KW KWH 23,410 Control Control <t< th=""><th>ECO Number</th><th>Annual Water</th><th>Annual</th><th></th><th>Saving</th><th>WATER</th><th>Total</th><th>Total</th></t<>	ECO Number	Annual Water	Annual		Saving	WATER	Total	Total
inks 523,410 1 \$217.22 \$233.105 inks 839,865 2 \$348.54 \$368.72 L: 1,363,275 0 0 \$0.00 \$0.00 ks 0 0 \$0.00 \$0.00 \$0.00 ks 0 0 \$0.00 \$0.00 \$0.00 ks 0 0 \$0.00 \$0.00 \$0.00 c: 0 0 \$0.00 \$0.00 \$0.00 sets 0 \$0.00 \$0.00 \$0.00 \$0.00 :: 0 \$0.00 \$0.00 \$0.00 \$0.00 :: 0 \$0.00 \$0.00 \$0.00 \$0.00 :: 0 \$0.00 \$0.00 \$0.00 \$0.00 :: 0 \$0.00 \$0.00 \$0.00 \$0.00 :: 0 0 \$0.00 \$0.00 \$0.00 :: 0 0 \$0.00 \$0.00 \$0.00 <	23,410 9,865 0 0 0 0 0 0 0 0 0 0 0 0 0	23,410 9,865 0 0 0 0 0 0 0 0 0 0 0 0 0	ECO Type		ELEC		GAS	Dollar Saving	Dollar Saving	Dollars Invested
inks 839,865 2 \$348.54 \$368.72 1,363,275 0 0 \$0.00 \$0.00 ks 0 0 \$0.00 \$0.00 ks 0 0 \$0.00 \$0.00 ks 0 0 \$0.00 \$0.00 cs 0 0 \$0.00 \$0.00 cs 0 \$0.00 \$0.00 \$0.00	39,865 0 0 0 0 0 0 0 0 0 0 0 0 0	39,865 0 0 0 0 0 0 0 0 0 0 0 0 0	1	区			-	\$217.22	\$231.05	\$489.60
L: 1,363,275 0 0 0 \$0.00 \$0.00 ks. ks 0 0 0 3 \$565.76 \$599.77 ks. 0 0 0 0 \$0.00 \$0.00 ks. 0 0 \$0.00 \$0.00 \$0.00 ks. 0 0 \$0.00 \$0.00 \$0.00 ks. 0 0 \$0.00 \$0.00 \$0.00 \$0.00 ks. 0 0 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 ks. 0 0 \$0.00 \$0.	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Lavatory Sinks	839,865			2	\$348.54	\$368.72	\$244.80
L: 1,363,275 0 0 3 \$565,76 \$599,77 ks 0 0 \$0.00 \$0.00 L: 0 0 \$0.00 \$0.00 L: 0 0 \$0.00 \$0.00 sets 0 0 \$0.00 \$0.00 sets 0 \$0.00 \$0.00 \$0.00 L: 138,700 \$0.00 \$0.00 \$0.00 L: 0 \$0.00 \$0.00	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		0			0	\$0.00	\$0.00	\$0.00
ks 0 \$0.00 \$0.00 \$0.00 L: 0 \$0.00 \$0.00 \$0.00 L: 0 0 \$0.00 \$0.00 sets 0 \$0.00 \$0.00 \$0.00 E: 138,700 \$0.00 \$0.00 \$0.00 sets 0 \$0.00 \$0.00 \$0.00 E: 138,700 \$0.00 \$0.00 \$0.00 sets 0 \$0.00 \$0.00 \$0.00 I: 0 \$0.00 \$0.00 \$0.00 III 0 \$0.00 \$0.00 \$0.00	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	ECO1 TOTAL:	1,363,275	0	0	3	\$565.76	\$599.77	\$734.40
ks 0 \$0.00 \$0.00 L: 0 0 \$0.00 \$0.00 sets 0 0 \$0.00 \$0.00 sets 0 0 \$0.00 \$0.00 sets 0 \$0.00 \$0.00 \$0.00 L: 138,700 \$0.00 \$0.00 \$0.00 c 0 \$0.00 \$0.00 \$0.00 i 0 \$0.00 \$0.00 \$0.00 i 0 \$0.00 \$0.00 \$0.00 sads 0 \$0.00 \$0.00 \$0.00 sads 0 \$0.00 \$0.00 \$0.00 inf	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0	2	0			0	\$0.00	\$0.00	\$0.00
Color Colo	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0	Misc. Sinks	0			0	\$0.00	\$0.00	\$0.00
L: 0 0 0 \$0.00 \$0.00 sets 0 \$0.00 \$0.00 \$0.00 sets 0 \$0.00 \$0.00 \$0.00 L: 138,700 \$0.00 \$0.00 \$0.00 L: 138,700 \$0.00 \$0.00 \$0.00 L: 0 \$0.00 \$0.00 \$0.00 sads 0 \$0.00 \$0.00 \$0.00 L: 0 \$0.00 \$0.00 \$0.00 Int 0 \$0.00 \$0.00	38,700 0 0 0 0 0 0 0 0 0 0 0 0	38,700 0 0 0 0 0 0 0 0 0 0 0 0		0			0	\$0.00	\$0.00	\$0.00
sets \$57.56 \$57.56 sets \$0 \$0.00 \$0.00 L: 138,700 \$0.00 \$0.00 \$0.00 L: 138,700 \$0.00 \$0.00 \$0.00 c 0 \$0.00 \$0.00 \$0.00 c 0 \$0.00 \$0.00 \$0.00 cads 0 \$0.00 \$0.00 \$0.00 cade 0 \$0.00 \$0.00 \$0.00 cade <	38,700 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
sets 0 \$0.00 \$0.00 L: 138,700 \$0.00 \$0.00 i 0 \$0.00 \$0.00 eads 0 \$0.00 \$0.00 int 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3	138,700				\$57.56	\$57.56	\$120.10
L: 138,700 \$0.00 \$0.00 i 0 \$0.00 \$0.00 i 0 \$0.00 \$0.00 i: 0 \$0.00 \$0.00	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Water Closets	0				\$0.00	\$0.00	\$0.00
L: 438,700 \$57,56 \$57,56 0 0 \$0.00 \$0.00 1 0 \$0.00 \$0.00 1 0 \$0.00 \$0.00 1: 0 \$0.00 \$0.00 1: 0 0 \$0.00 1: 0 0 \$0.00 1: 0 \$0.00 \$0.00 1: 0 \$0.00 \$0.00 1: 0 \$0.00 \$0.00 2: 0 \$0.00 \$0.00 3: 0 \$0.00 4 0 \$0.00 \$0.00 4 0 \$0.00 \$0.00 5:0:00 \$0.00 \$0.00 6:0:00 \$0.00 \$0.00 7: \$0.00 \$0.00 8:0:00 \$0.00 \$0.00 8:0:00 \$0.00 \$0.00 8:0:00 \$0.00 \$0.00 8:0:00 \$0.00 \$0.00 <td>0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0</td> <td>0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0</td> <td></td> <td>0</td> <td></td> <td></td> <td></td> <td>\$0.00</td> <td>\$0.00</td> <td>\$0.00</td>	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		0				\$0.00	\$0.00	\$0.00
i 0 80.00 \$0	0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ECO3 TOTAL:	138,700				\$57.56	\$57.56	\$120.10
i 0 \$0.00 \$0.00 \$0.00 L: 0 \$0.00 \$0.00 \$0.00 ads 0 \$0.00 \$0.00 \$0.00 ads 0 0 \$0.00 \$0.00 L: 0 0 \$0.00 \$0.00 L: 0 0 \$0.00 \$0.00 int 0 \$0.00 \$0.00 \$0.00	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	†	0				\$0.00	\$0.00	\$0.00
L: 0	0 0 0 0 0 0 0	0 0 0 0 0 0 0	Urinals	0				\$0.00	\$0.00	\$0.00
L: 0 \$0.00 \$0.00 \$0.00 ads 0 \$0.00 \$0.00 \$0.00 L: 0 0 \$0.00 \$0.00 Int 0 0 \$0.00 \$0.00 Int 0 0 \$0.00 \$0.00 Int 0 \$0.00 \$0.00 \$0.00	0 0 0 0 0 0	0 0 0 0 0 0		0				\$0.00	\$0.00	\$0.00
eads 0 \$0.00 \$0.00 Pads 0 \$0.00 \$0.00 L: 0 0 \$0.00 \$0.00 L: 0 0 \$0.00 \$0.00 int 0 0 \$0.00 \$0.00 int 0 \$0.00 \$0.00 \$0.00	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0	ECO4 TOTAL:	0				\$0.00	\$0.00	\$0.00
eads 0 \$0.00 \$0.00 L: 0 0 \$0.00 \$0.00 I: 0 0 \$0.00 \$0.00 Int 0 \$0.00 \$0.00 \$0.00 I 0 \$0.00 \$0.00 \$0.00 I 0 \$0.00 \$0.00 \$0.00 I: 0 \$0.00 \$0.00 \$0.00	0 0 0 0 0	0 0 0 0 0 0	2	0			0	\$0.00	\$0.00	\$0.00
L: 0 0 0 0 \$0.00 \$0.00 int 0 0 0 0 \$0.00 \$0.00 int 0 0 0 0 0 \$0.00 \$0.00 int 0 0 0 0 0 \$0.00 \$0.00 int 0 0 0 0 0 0 \$0.00 \$0.00 int 0 0 0 0 0 0 \$0.00 \$0.00 int 0 0 0 0 0 0 \$0.00 int 0 0 0 0 0 0 0 \$0.00 int 0 0 0 0 0 0 0 \$0.00 int 0 0 0 0 0 0 0 \$0.00 int 0 0 0 0 0 0 0 \$0.00 int 0 0 0 0 0 0 0 \$0.00 int 0 0 0 0 0 0 0 \$0.00 int 0 0 0 0 0 0 0 \$0.00 int 0 0 0 0 0 0 0 \$0.00 int 0 0 0 0 0 0 0 0 \$0.00 int 0 0 0 0 0 0 0 0 \$0.00 int 0 0 0 0 0 0 0 0 0 \$0.00 int 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	Shower Heads	0			0	\$0.00	\$0.00	\$0.00
L: 0 0 \$0.00 \$0.00 int 0 \$0.00 \$0.00 \$0.00	0 0 0 0	0 0 0 0		0			0	\$0.00	\$0.00	\$0.00
t 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 0 0 \$0.00 \$0.00 0 0 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00	0 0 0 0 0 0 0 0 0 0	o o o o o o o o o o	ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
t 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00	o o o o	0 0 0 0 0 0 0	9	0			0	\$0.00	\$0.00	\$0.00
0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00	o o o o	o	Equipment	0			0	\$0.00	\$0.00	\$0.00
00.0\$ 0.00\$ 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0	0 0 0	Related	0			0	\$0.00	\$0.00	\$0.00
0 0 0 \$0.00 \$0.00 0 0 0 \$0.00	0 0	0 0 0	And the same of the Land Andrews and the same of the s	0			0	\$0.00	\$0.00	\$0.00
00.0\$ 0.00 0 0 0	0 0 0	0 0 0		0			0	\$0.00	\$0.00	\$0.00
			ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

FACILITY NO. 1532 FUNCTION: Training Building		FY94S EEAP FI	T. KNOX WA	X WALL CONSERVATION STUDY	TION S	TUDY		1
1532 PuncTION: Training Building		CALC	SULATIO	IN WORK SHEET 1			DATE:	31 Oct 94
Existing Fixture System Retrofited Fixture System Description LPM Description LPM Description LPM Description LPM RRS/YR Quantity	FACILITY NO. :	1532		FUNCTION	·	Training B	uilding	
Existing Fixture System Retrofited Fixture System Description LPM Description LPM HRS/YR Quantity	Occupancy:	2		Operating Hours		1		
LPM	ECO Number	Existing Fixture System	1 _ 5	Retrofited Fixture Syst		Usage	Fixtures	Water Leaks
LPM	ECO 1ype	Description Public Layatory	L P M 9 5	Spring Loaded Fallcets	1 L P W	130 130	Quantity 2	Eliminated LPY
LPF	Lavatory Sinks		?		F	3	7	
Tank Type (public)	ECO1 TOTAL:	- A () A (LPM		LPM		2	0
Tank Type (public)	2							
Tank Type (public) 11.4 Install 1.6 GPF Tank Type 6 1300 1	Misc. Sinks							
Tank Type (public) 11.4 Install 1.6 GPF Tank Type 6 1300 1	ECO2 TOTAL:		LPF		LPF	#FL/YR	0	0
State Water Closet LPF	3	Tank Type (public)		Install 1.6 GPF Tank Type	9	1300	-	
Separation LPF #FL/YR 1 1 1 1 1 1 1 1 1	Water Closets			Water Closet		1977		
Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 1300 2	ECO3 TOTAL:		LPF		LPF	#FL/YR		0
Comparing the Company of the Compa	4	Wall Mounted Flush Valve		nstall 1.0 GPF Flush Valve	3.79	1300	2	
Company Comp	Urinals			Repair Kit				
ds :	ECO4 TOTAL:		LPM		I PM	HRS/YR		c
t	5							
t	Shower Heads							
	ECO5 TOTAL:		LPM		LPM		0	0
	9							
	Equipment							
	Related							
	ECO6 TOTAL:						0	0
			Systems	s Engineering and Manago	ement C	orporation		ille, TN
Systems Engineering and Management Corporation, Knoxville, TN								
Systems Engineering and Management Corporation,								

Systems Engineering and Management Corporation, Knoxville, TN

FACILITY NO.:	Water Rate	0 4.0	1/1/4		C		+ 11/1/11
1532		0.42	J\/♠		Energy Kate:		#/KVVH
1	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ECO Number	Annual Water	Annual		Saving	WATER	Total	Total
ECO Type	Saving LPY	ELEC	FLEC	GAS	Dollar Saving	Dollar Saving	Dollars Invested
1	93,210			0	\$38.68	\$40.92	\$489.60
Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
ECO1 TOTAL:	93,210	0	0	0	\$38.68	\$40.92	\$489.60
2	0			0	\$0.00	\$0.00	\$0.00
Misc. Sinks							
ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
	7,020				\$2.91	\$2.91	\$419.16
Water Closets							
ECO3 TOTAL:	7,020				\$2.91	\$2.91	\$419.16
4	4,914				\$2.04	\$2.04	\$127.30
Urinals							
ECO4 TOTAL:	4,914				\$2.04	\$2.04	\$127.30
5 Shower Heads	0			0	\$0.00	\$0.00	\$0.00
FCOS TOTAL .	C	c	c	c	00 0\$	00 0 \$	00 00
9				•			
Equipment Related							
ECOS TOTAL .		c			00 00	00 00	G G
ECOO TOTAL.					\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

	FY94S EEAP FT	1 .	KNOX WAT CONSERVATION STUDY	S NOI	TUDY		10
	CALCI	CULATI	뇌			DATE:	31 Oct 94
FACILITY NO. :	1541		FUNCTION:	- 1	Training Building	uilding	
Occupancy:	3		Operating Hours:	,	æ		
ECO Number	Existing Fixture System		Retrofited Fixture System	٦	Usage	Fixtures	Water Leaks
ECO Iype	Description Public Layatory	LPM 1	Spring Loaded Faucets	LPM A	HRS/YR	Quantity	Eliminated LPY
Lavatory Sinks		5		;	2	F	
ECO1 TOTAL:		LPM		LPM		4	0
2							
Misc. Sinks							
ECO2 TOTAL:		LPF		LPF	#FL/YR		0
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	1300	2	
Water Closets			Repair Kit				
ECO3 TOTAL:		H H H H		LPF	#FL/YR	2	0
4	Wall Mounted Flush Valve	5.68	Install 1.0 GPF Flush Valve	3.79	1300	2	
Urinals							
TOT A							
5.504 101AL.					AT/GAL	7	>
Shower Heads							
FCOS TOTAL		M Q		MO		c	C
9				i		>	
Equipment							
Related			And adjoint on Appropriate the state of the				
ECO6 TOTAL:						0	0

Systems Engineering and Management Corporation, Knoxville, TN

FACILITY NO.: Water Rate: 0.42 S/KL Fnergy Rate: \$/KWH 1541 Gas Rate: 10.51 \$/MWH Demand Rate: \$/KWH ECO Number: Annual Water Annual Energy Saving LPY KWH MANH Dollar Saving LPY Lotal Total S/KW Total Total Total Total Total Total S/KW S/KW<	Water Rate: 0.42 \$/KL Gas Rate: 10.51 \$/MWH		Ľ	CALCULATION WOR	LCULAT	ION MOI		K SHEET 2	2 OF 2
Cas Rate: 10.51 \$/MWH	Cas Rate: 10.51 \$/MWH	FACILITY NO. :	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
Saving LPY KW KWH 950,820 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Saving LPY KW KWH 950,820 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	- † -	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
Saving LPY KW KWH KWH S50,820	Saving LPY KW KWH KWH S50,820 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ECO Number	Annual Water	ᇡ		Saving	WATER	Total	Total
4,914 9,880 9,880 9,880 1,914 0 0 0 0 0 ds 1,914 0 0 0 0 1,000	950,820 0 950,820 0 0 0 9,880 9,880 4,914 0 0 0 0 0 0 0 0 0 0 0 0 0	ECO Type		ELEC	ELEC KWH	GAS	Dollar Saving	Dollar Saving	Dollars Invested
68 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ks 0 950,820 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1	\tilde{z}			2	\$394.59	\$417.43	\$979.20
950,820 0 0 0 0 0 0 9,880 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	950,820 0 0 0 0 0 9,880 4,914 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
15 9,880 9,880 9,880 4,914 0 0 0 0 0 0 0 0 0 0 0 0 0	ts 9,880 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ECO1 TOTAL:	950,820	0	0	2	\$394.59	\$417.43	\$979.20
ts 9,880 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	9,880 9,880 9,880 4,914 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2	0			0	\$0.00	\$0.00	\$0.00
9,880 9,880 4,914 4,914 0 0 0 0 0 0 0 0 0 0 0 0 0 0	9,880 9,880 4,914 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Misc. Sinks							
ts 9,880	9,880 9,880 4,914 0 0 0 0 0 0 0 0 0 0 0 0 0	ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
9,880 4,914 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	9,880 4,914 0 0 0 0 ds 0 0 0 0	3	088'6				\$4.10	\$4.10	\$120.10
9,880 4,914 0 0 0 0 t 0 0 0 0	9,880 4,914 0 0 0 0 0 0 0 0 0 0 0 0 0	Water Closets							
4,914 4,914 0 0 0 t 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	4,914 4,914 0 0 ds 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ECO3 TOTAL:	9,880				\$4.10	\$4.10	\$120.10
ds 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ds 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	4	4,914				\$2.04	\$2.04	\$127.30
ds 0 0 0 0 t	ds 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Urinais							
0 0 0	0 0 0	ECO4 TOTAL:	4,914				\$2.04	\$2.04	\$127.30
0 0 0	0 0 0	5 Shower Heads	0			0	\$0.00	\$0.00	\$0.00
0 0 0	0 0 0	ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
0 0	0 0	9							
0 0 0	0 0	Equipment Related							
0	0								
		ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
		SYSTEMS C	ORP			Systems	: Engineering and	Management Cor	noration Knoxville

Systems Engineering and Management Corporation, Knoxville, TN

FACILITY NO. 1609 FUNCTION: Fire Station CALCULATION WORK SHEET 1 DATE: 31 Oct 94	1609 FUNCTION: Fire Station	1609 Function Work Sheet 1 Particle Station Fire Station								Contraction of the last of the
Fine Station	Temporary Temporary Temporary	FUNCTION: Fire Station		CALC	CULATI	ON WORK SHEET 1			DATE:	31 Oct 94
Existing Fixture System Retrofited Fixture System Description LPM Description LPM Description LPM Description LPM LPF LPM LPF LPM LPF LPM LPF LPM LPF LP	7 Operating Hours: 24	Austring Fixture System Retrofited Fixture System LPM Description LPM Description LPM LPM Description LPM LPF #FL/NR 1 LPM LPF HFL/NR 1 LPF HFL/NR LPM LPF HFL/NR LPM LP	FACILITY NO.:	1609		FUNCTION:		Fire Static	u.	
Existing Fixture System Retrofited Fixture System Usage Fixtures	xisting Fixture System Retrofited Fixture System Usage Description Eixtures Eixture	LPM Description LPM HRS/YR Quantity	Occupancy:	7		Operating Hours:		24	,	
Description LPM Description LPM HRS/YR Quantity	Description LPM HRS/YR Quantity Private Lavatory 15 Spring Loaded Faucets 4.7 200 4 Service Sink 15 Install Aerators 9.5 130 1 Service Sink 15 Install 3.5 GPF Flush Valve 1.2 4 1 Mounted Flush Valve 1.14 Install 1.6 GPF Flush Valve 6 365 1 Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 2200 2 Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 2200 2 Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 2200 2 LPM Repair Kit Repair Kit 0 0 0 LPM I.PM I.PM I.PM I.PM I.PM I.PM	Description LPM HRS/YR Quantity Private Lavatory 15 Spring Loaded Faucets 4.7 200 4 Private Lavatory 15 Install Aerators 9.5 130 1 Service Sink 15 Install 3.5 GPF Flush Valve 13.2 1300 1 Mounted Flush Valve 17 Install 1.0 GPF Flush Valve 6 365 1 Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 2200 2 Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 2200 2 Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 2200 2 LPM Repair Kit LPM ILPM ILPM ILPM 0	ECO Number			Retrofited Fixture Syste	me	Usage	Fixtures	Water Leaks
Private Lavatory 15 Spring Loaded Faucets 4.7 200 4	LPM	LPM	ECO Type	Description	LPM		LPM	HRS/YR	Quantity	Eliminated LPY
Service Sink LPM Install Aerators 9.5 130 1	Service Sink LPF Install Aerators 9.5 130 1 Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 1300 3 ank Type (public) 11.4 Install 1.6 GPF Tank Type 6 365 1 Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 2200 2 Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 2200 2 Repair Kit Repair Kit I.PM HRS/YR 2	Service Sink LPM 4 Service Sink 15 Install Aerators 9.5 130 1 LPF #FL/YR 1	1 Lavatory Sinks	Private Lavatory	15	Spring Loaded Faucets	4.7	200	4	
Service Sink 15 Install Aerators 9.5 130 1	Service Sink 15 Install Aerators 9.5 130 1 Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 1300 3 ank Type (public) 11.4 Install 1.6 GPF Tank Type 6 365 1 Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 2200 2 Repair Kit Repair Kit LPM HRS/YR 2 LPM HRS/YR 2	Service Sink 15	ECO1 TOTAL:		LPM		LPM		4	0
Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 1300 3	LPF	LPF	2	Service Sink	15	Install Aerators	9.5	130	_	
Floor Mounted Flush Valve LPF	LPF	LPF	Misc. Sinks							
Filoor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 1300 3	Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 1300 3 Repair Kit	Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 3.5 10 3 ank Type (public) 11.4 Install 1.6 GPF Tank Type 6 365 1 Abounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 2200 2 Abounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 2200 2 LPM Repair Kit LPM LPM LPM 0 LPM LPM ILPM 0 0 Systems Engineering and Management Corporation, Knoxville, TN	ECO2 TOTAL:		LPF		LPF	#FL/YR		0
Tank Type (public) 11.4 Install 1.6 GPF Tank Type 6 365 1	ank Type (public) 11.4 Install 1.6 GPF Tank Type 6 365 1 Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 2200 2 Repair Kit LPM HRS/YR 2 LPM HRS/YR 2 LPM HRS/YR 2	ank Type (public) 11.4 Install 1.6 GPF Tank Type 6 365 1 Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 2200 2 Repair Kit LPM HRS/YR 2 LPM HRS/YR 2 Systems Engineering and Management Corporation, Knoxville, TN	3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	1300	3	
Tank Type (public) 11.4 Install 1.6 GPF Tank Type 6 365 1	ank Type (public) 11.4 Install 1.6 GPF Tank Type 6 365 1 LPF #FL/YR 4 Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 2200 2 Repair Kit	ank Type (public) 11.4 Install 1.6 GPF Tank Type 6 365 1 LPF #FL/YR 4 Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 2200 2 Repair Kit	Water Closets			Repair Kit				
LPF #FL/YR 4	Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 2200 2 Repair Kit LPM HRS/YR 2 LPM HRS/YR 2 LPM O C C C C C C C C C C C C C C C C C C	Nounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 2200 2		Tank Type (public)	11.4	Install 1.6 GPF Tank Type	9	365		
Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 2200 2	Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 2200 2 Repair Kit	Mounted Flush Valve 3.79 2200 2 Repair Kit LPM LPM LPM 2 LPM HRS/YR 2 2 3 3 3 3 3 3 3 3 3 3 4	ECO3 TOTAL:		LPF		LPF	#FL/YR	4	0
Comparing the control of the contr	LPM HRS/YR 2	LPM HRS/YR 2 LPM HRS/YR 2 LPM O O LPM O O Systems Engineering and Management Corporation, Knoxville, TN	4	Wall Mounted Flush Valve	5.68		3.79	2200	2	
LPM HRS/YR 2	LPM HRS/YR 2	LPM HRS/YR 2 LPM 0 LPM 0 Systems Engineering and Management Corporation, Knoxville, TN	Urinals			Repair Kit				
ds : : : : : : : : : : : : : : : : : : :		LPM 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ECO4 TOTAL:		LPM		LPM		2	0
## Company of the com		Systems Engineering and Management Corporation, Knoxville, TN	9							
t		Systems Engineering and Management Corporation, Knoxville, TN	Shower Heads							
		Systems Engineering and Management Corporation, Knoxville, TN	ECO5 TOTAL:		LPM		LPM		0	0
		Systems Engineering and Management Corporation, Knoxville, TN	9							
		Systems Engineering and Management Corporation, Knoxville, TN	Equipment Related							
		Systems Engineering and Management Corporation, Knoxville, TN								
		Systems Engineering and Management Corporation, Knoxville, TN	FCO6 TOTAL		_ **					c
		Systems Engineering and Management Corporation,					₩ ₩ ₩		2	

Systems Engineering and Management Corporation, Knoxville, TN

## ## ## ### ### #####################	Water Rate: 0.42 \$/KL Gas Rate: 10.51 \$/MWH Annual Water Annual Energy & KWH \$/MWH 550,800 0 0 550,800 0 0 42,900 0 0 42,900 0 0 42,900 0 0 8,316 0 0 8,316 0 0 0 0 0 0 0 0 0 0 0 0 0 0		7. L	FY94S EEAP FI. KNUX WAY CALCULATION WOR	LCULAT	ION MOI		SHEET 2	2 OF 2
Gas Rate: 10.51 \$\text{MWVH}\$ Demand Rate: \$\text{Total}\$ \$\text{SWV}\$ Saving LPY KW KWH MWH Dollar Saving \$228.58 F228.58 \$\text{SO}\$ ks 0 0 1 \$\text{\$228.58}\$ \$\text{\$241.81}\$ \$50,800 0 0 1 \$\text{\$228.58}\$ \$\text{\$241.81}\$ \$50,800 0 0 \$\text{\$0.18}\$ \$\text{\$241.81}\$ \$50,800 0 0 \$\text{\$6.18}\$ \$\text{\$541.81}\$ \$42,900 0 0 \$\text{\$6.18}\$ \$\text{\$51.21}\$ \$42,900 0 0 \$\text{\$6.18}\$ \$\text{\$51.21}\$ \$42,900 0 \$\text{\$6.97}\$ \$\text{\$6.97}\$ \$\text{\$6.97}\$ \$6.77 \$\text{\$6.97}\$ \$\text{\$5.45}\$ \$\text{\$6.00}\$ \$6 \$0 \$0 \$\text{\$6.00}\$ \$\text{\$6.00}\$ \$6 \$0 \$0 \$\text{\$6.00}\$ \$\text{\$6.00}\$ \$6 \$0 \$0 \$0.00 \$\text{\$6.00}\$	Cas Rate: 10.51 \$/MWH	FACILITY NO. :	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
Annual Water Annual Parish Annual Energy Saving WATER Total Saving LPY KWH MWH Dollar Saving S228.58 \$241.81 550,800 0 0 42,900 0 1 \$228.58 \$241.81 550,800 0 0 1 \$228.58 \$241.81 \$0.00 5 42,900 0 0 1 \$228.58 \$241.81 \$0.00 42,900 0 0 0 \$0.18 \$1.21 \$0.82 \$0.82 \$0.82 \$0.82 \$0.82 \$0.82 \$0.82 \$0.82 \$0.82 \$0.82 \$0.82 \$0.00 </th <th> Saving LPY KW MWH Saving Saving LPY KW KWH MWH \$528.58 \$241.81 \$50,800 \$0 \$0 \$0.00 \$</th> <th></th> <th>Gas Rate:</th> <th>10.51</th> <th>\$/MWH</th> <th></th> <th>Demand Rate:</th> <th></th> <th>\$/KW</th>	Saving LPY KW MWH Saving Saving LPY KW KWH MWH \$528.58 \$241.81 \$50,800 \$0 \$0 \$0.00 \$		Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ks ELEC ELEC GAS GAS Dollar Saving 550,800 FLEC ELEC GAS CAT 828.58 S241.81 550,800 0 0 4\$0.00 \$0.00 550,800 0 0 1 \$228.58 \$241.81 42,900 0 0 0 \$0.18 \$1.21 42,900 0 0 \$0.18 \$1.21 42,900 0 0 \$0.18 \$1.21 42,900 0 0 \$0.18 \$1.21 42,900 0 0 \$0.82 \$6.15 42,900 0 0 \$6.15 \$6.15 42,900 0 \$0.00 \$6.97 \$6.97 45,916 \$6.97 \$6.97 \$6.97 8,316 \$3.45 \$3.45 0 0 \$0.00 \$0.00 1 \$0.00 \$0.00 \$0.00	ks Saving LPY KW KWH KWH 550,800 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ECO Number	Annual Water			Saving	WATER	Total	Total
ks 550,800 1 \$228.58 \$241.81 650,800 0 1 \$228.58 \$241.81 42,900 0 1 \$228.58 \$241.81 42,900 0 0 \$0.18 \$1.21 42,900 0 0 \$6.15 \$6.15 42,900 0 0 \$6.15 \$6.15 42,900 0 \$0.82 \$6.15 42,900 0 \$6.15 \$6.15 42,900 0 \$6.15 \$6.15 42,900 0 \$6.15 \$6.15 42,900 \$6.15 \$6.15 \$6.15 42,900 \$6.15 \$6.15 \$6.15 45,316 \$3.45 \$3.45 45 \$0.00 \$0.00 \$0.00 46 \$0.00 \$0.00 \$0.00 47 \$0.00 \$0.00 \$0.00 48 \$0.00 \$0.00 \$0.00 50.00 \$0.00 \$0.00 \$0.00	ks 0 550,800 0 0 42,900 0 0 42,900 0 0 14,820 0 0 1,971 0 0 8,316 0 0 class 1,971 0 0 1,971 0 0 0 class 1,971 0 0 class 1,971 0 0 class 1,971 0 0 0 class 1,971 0 0 0 class 1,971 0 0 0 class 1,971 0 0 0	ECO Type			ELEC	GAS	Dollar Saving	Dollar Saving	Dollars Invested
ks 0 \$0.00 \$0.00 550,800 0 1 \$228.58 \$241.81 42,900 0 0 \$0.18 \$1.21 42,900 0 0 \$0.18 \$1.21 42,900 0 0 \$0.18 \$1.21 42,900 0 0 \$6.15 \$6.15 42,900 0 0 \$6.15 \$6.15 45 1,971 \$6.81 \$6.15 \$6.15 45 1,971 \$6.97 \$6.97 \$6.97 8,316 \$3.45 \$3.45 \$3.45 8,316 \$3.45 \$3.45 \$0.00 ds 0 \$0.00 \$0.00 4 \$0.00 \$0.00 \$0.00 4 \$0.00 \$0.00 \$0.00	ks 0 550,800 0 0 42,900 0 0 14,820 0 0 14,820 0 0 1,971 16,791 8,316 0 0 0 classifies 0 0 0 transfer of the contraction	1	Ĭ			1	\$228.58	\$241.81	\$979.20
550,800 0 1 \$228.58 \$241.81 42,900 0 0 \$0.18 \$1.21 42,900 0 0 \$6.15 \$6.15 42,900 0 0 \$6.82 \$6.15 42,900 0 0 \$6.97 \$6.97 \$6.97 42,900 0 \$6.97 \$6.97 \$6.97 \$6.97 46,791 \$6.97 \$6.97 \$6.97 \$6.97 8,316 \$3.45 \$3.45 \$3.45 \$0.00 ds 0 0 \$0.00 \$0.00 \$0.00 t 1 \$0.00 \$0.00 \$0.00 \$0.00 t 0 0 \$0.00 \$0.00 \$0.00	550,800 0 0 42,900 0 0 42,900 0 0 0 14,820 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
\$0.18 \$0.18 \$1.21 \$1.21 \$1.21 \$1.2900 \$0 \$0.18 \$1.21 \$1.4,820 \$0 \$0.18 \$1.21 \$1.971 \$6.15 \$6.15 \$1.971 \$0.82 \$0.82 \$1.6,791 \$0.82 \$0.82 \$1.6,791 \$6.97 \$6.97 \$3.45 \$3.45 \$3.45 \$3.46 \$3.45 \$3.45 \$0 \$0 \$0.00 \$0.00 \$0 \$0.00 \$0.00 \$0.00 \$0 \$0.00 \$0.00 \$0.00 \$0 \$0.00 \$0.00 \$0.00	42,900 42,900 0 14,820 1,971 16,791 8,316 0 0 0 0 0 0 0 0 0 0 0 0 0	ECO1 TOTAL:	550,800	0	0	1	\$228.58	\$241.81	\$979.20
\$2,900 \$0 \$0.18 \$1.21 \$14,820 \$0 \$0 \$6.15 \$1,971 \$0.82 \$0.82 \$1,971 \$0.82 \$0.82 \$1,971 \$0.82 \$0.82 \$1,971 \$0.82 \$0.82 \$1,971 \$0.82 \$0.82 \$1,971 \$0.82 \$0.82 \$1,971 \$0.82 \$0.82 \$1,971 \$0.82 \$0.97 \$1,971 \$0.82 \$0.97 \$2,45 \$3.45 \$2,45 \$0.00 \$2,00 \$0.00 \$2,00 \$0.00 \$2,00 \$0.00 \$2,00 \$0.00 \$2,00 \$0.00 \$2,00 \$0.00	42,900 0 0 0 14,820	2	42,900			0	\$0.18	\$1.21	\$9.70
ts 1,971	42,900 0 0 0 14,820 ts 1,971	Misc. Sinks							
ts 14,820	ts 14,820	ECO2 TOTAL:	42,900	0	0	0	\$0.18	\$1.21	\$9.70
ts 1,971 \$0.82 \$0.	ts 1,971 16,791 8,316 0 0 0 0 tr	3	14,820				\$6.15	\$6.15	\$180.14
1,9/1 16,791 8,316 8,316 8,316 0 0 0 0 \$0.00	1,971 16,791 8,316 0 0 0 0 0 0 0 0	Water Closets							
16,791 \$6.97 \$6.97 8,316 \$3.45 \$3.45 8,316 \$3.45 \$3.45 0 0 \$0.00 ds 0 0 \$0.00 t 0 0 \$0.00 t 0 0 \$0.00 t 0 0 \$0.00	16,791 8,316 0 0 0 0 0 0 0 0 0 0 0 0		1,9/1				\$0.82	\$0.82	\$419.16
8,316 \$3.45 \$3.45 \$3.45 8,316 \$3.45 \$3.45 0 0 0 0 \$0.00 \$0.00 t	8,316 8,316 0 0 0 0 0 0 0 0 0 0	ECO3 TOTAL:	16,791				\$6.97	\$6.97	\$599.30
8,316 \$3.45 \$3.45 \$3.45 ds	8,316 0 0 0 0 0 0 0 0 0 0	4	8,316				\$3.45	\$3.45	\$127.30
8,316 \$3.45 \$3.45 0 0 \$0.00 \$0.00 ds 0 0 \$0.00 t 0 0 \$0.00 t 0 0 \$0.00 0 0 0 \$0.00	8,316 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Urinals							
5 0 \$0.00 \$0.00 wer Heads 0 0 \$0.00 \$0.00 TOTAL: 0 0 \$0.00 \$0.00 Inipment 0 0 \$0.00 \$0.00 TOTAL: 0 0 0 \$0.00	0 0 0	ECO4 TOTAL:	8,316				\$3.45	\$3.45	\$127.30
wer Heads wer Heads \$0.00 \$0.00 \$0.00 TOTAL: 0 0 0 \$0.00 \$0.00 Inipment Selated 0 0 0 \$0.00 \$0.00 TOTAL: 0 0 \$0.00 \$0.00 \$0.00	0 0 0	5	0			0	\$0.00	\$0.00	\$0.00
TOTAL: 0 0 0 0 \$0.00 \$0.00 6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0	Shower Heads							
	0 0 0	ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
00.00\$ 00.00 \$0.00	0 0 0	9							
00.0\$ 00.00 0 0	0 0	Equipment							
00.0\$ 0 0 0 0	0 0	Related							
00.0\$ 0.00\$ 0 0 0	0 0								
		ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

	FY94S EEAP F	T. KN	FY94S EEAP FT. KNOX WATER CONSERVATION STUDY	S NOI	TUDY		10
	CAL	CULAT	CALCULATION WORK SHEET 1			DATE:	
FACILITY NO. :	1610		FUNCTION:	,	Bowling Alley	iley	
Occupancy:	Varies		Operating Hours:	·	12		
ECO Number ECO Type	Existing Fixture System Description	r I PM	Retrofited Fixture System	n Md	Usage HRS/YR	Fixtures	Water Leaks
1 Lavatory Sinks	Public Lavatory		Spring Loaded Faucets and Mixing Valve	4.7	365	10	
ECO1 TOTAL:		LPM		LPM		10	0
2 Misc. Sinks							
ECO2 TOTAL:		LPF		LPF	#FL/YR	0	0
3 Water Closets	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve Repair Kit	13.2	3650	9	
ECO3 TOTAL : 4 Urinals	Wall Mounted Flush Valve	LPF 5.68	Install 1.0 GPF Flush Valve Repair Kit	LPF 3.79	#FL/YR 3650	ဖွ	0
ECO4 TOTAL : 5 Shower Heads		Man		LPM	LPM HRS/YR	т	0
ECO5 TOTAL:		MGT.		LPM		0	0
Equipment Related							
ECO6 TOTAL:						0	0

Systems Engineering and Management Corporation, Knoxville, TN

2 OF 2		#WM/\$	\$/KW	Total	Dollars Invested	\$2,448.00		\$2,448.00	\$0.00		\$0.00	\$360.29			\$360.29	\$190.94	\$190.94	00.08		\$0.00				\$0.00
FT. KNOX WAPER CONSERVATION STUDY		\$	€9	Total	Dollar Saving	\$574.47		\$574.47	\$0.00		\$0.00	\$34.54		1. 1. 0.0	\$34.54	\$8.59	\$8.59	\$0.00		\$0.00				\$0.00
HER CONSER	LCULATION WORK SHEET 2	Energy Rate:	Demand Rate:	WATER	Dollar Saving	\$543.04		\$543.04	\$0.00		\$0.00	\$34.54		654 F4	\$34.34	\$8.59	\$8.59	\$0.00		\$0.00				\$0.00
NOX W	OM NOI			Saving	GAS MWH	3		3	0	The state of the s	0							0		0				0
P FT. K	LCULAT	\$/KL	\$/MWH	Energy 8	ELEC KWH			0			0									0				0
FY94S EEAP	CAI	0.42	10.51	Annual	ELEC KW			0			0								The state of the s	0				0
FY9		Water Rate:	Gas Rate:	Annual Water	Saving LPY	1,308,525		1,308,525	0		0	83,220		00000	03,220	20,696	20.696	0		0				0
		FACILITY NO.: 1610		ECO Number	ECO Type	_	Lavatory Sinks	ECO1 TOTAL:	2	Misc. Sinks	ECO2 TOTAL:	3	Water Closets	ECOS TOTAL.	ECOS IOIAL.	4 Urinals	ECO4 TOTAL:	5	Shower Heads	ECO5 TOTAL:	9	Equipment	Related	ECO6 TOTAL:

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	FY94S EEAP FT	T. KN	KNOX WAT CONSERVATION STUDY	S NO	TUDY		10
	CAL	CULAT	ᅵᅩ			DATE:	31 Oct 94
FACILITY NO. :	1720		FUNCTION:	. ,	Training Building	uilding	
Occupancy:	100		Operating Hours:	J	80		
ECO Number ECO Type	Existing Fixture System Description	n LPM	Retrofited Fixture System Description	μ M	Usage HRS/YR	Fixtures Quantity	Water Leaks Eliminated LPY
1 Lavatory Sinks	Public Lavatory Public Lavatory	15 9.5	Spring Loaded Faucets Spring Loaded Faucets	4.7	130	8 4	
ECO1 TOTAL:		LPM		LPM		7	0
2 Misc. Sinks							
ECO2 TOTAL:		LPF		LPF	#FL/YR	0	0
3 Water Closets	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve Repair Kit	13.2	2200	26	
ECO3 TOTAL:	Wall Mounted Flush Valve	LPF 5.68	Install 1.0 GPF Flush Valve	LPF 3.79	#FL/YR 7800	26	0
Urinals							
ECO4 TOTAL:		LPM		LPM	HRS/YR	10	0
Shower Heads							
ECO5 TOTAL:		LPM		LPM		0	0
Equipment Related							
ECO6 TOTAL:						0	0

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FACILITY NO.: Water Rate: 0.42 \$/KL Energy Rate: \$/KWH 1720 Gas Rate: 10.51 \$/MWH Demand Rate: \$/KWH ECO Number Annual Water Annual Energy Saving WATER Total Total ECO Type Saving LPY KW KWH MWH Dollar Saving Dollars Invested \$77.40 ECO Type Saving LPY KW KWH MWH Dollar Saving Dollars Invested \$734.40 ECO TOTAL: 186,420 0 0 1 \$111.43 \$117.36 \$734.40 ECO TOTAL: 454,935 0 0 \$0.00	Water Rate: 0.42 \$/KL Gas Rate: 10.51 \$/MWH Annual Water Annual ELEC \$/MWH Z68,515 ELEC ELEC Saving LPY KW KWH 268,515 0 0 0 0 0 217,360 0 0 217,360 0 0 147,420 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Water Rate: 0.42 \$/KL Gas Rate: 10.51 \$/MWH Annual Water Annual Energy & LPY ELEC ELEC Saving LPY KW KWH 268,515 0 0 0 35 186,420 0 0 454,935 0 0 0 217,360 0 0 0 447,420 0 0 0 5 0 0 0 6 0 0 0 7 147,420 0 0 8 0 0 0 9 0 0 0 147,420 0 0 0 9 0 0 0 10 0 0 0		/O	CALCULATION WOR	LCULAT	OM NOI	CALCULATION WORK SHEET 2	SHEET 2	
Gas Rate: 10.51 \$/MWH Demand Rate: \$ f/KW Annual Water Annual Energy Asving ELEC GAB WATER Total Saving LPY KW KWH MWH Dollar Saving Saving MATER Total 268,515 CBB,515 1 \$117.88 \$117.88 186,420 0 0 1 \$118.80 \$199.73 0 0 0 1 \$117.88 \$199.73 0 0 0 \$0.00 \$0.00 \$0.00 217,360 \$0.00 \$0.00 \$0.00 \$0.00 147,420 \$61.18 \$61.18 \$0.00 0 0 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 147,420 \$61.18 \$61.18 0 \$0.00 \$0.00 \$0.00	Gas Rate: 10.51 \$/MWH Annual Water Annual Energy ELEC S/MWH Saving LPY KW KWH 268,515 0 0 Saving LPY KW KWH KWH KWH KWH Color 0 0 0 0 Saving LPY KW KWH KWH KWH Color 0 <t< th=""><th>Gas Rate: 10.51 \$/MWH Annual Water Annual Energy & Annual Energy & ELEC Saving LPY KW KWH 268,515 ELEC ELEC ELEC ELEC ELEC KWH 26420 Saving LPY KW KWH 264,20 0 0 \$ 217,360 0 0 \$ 217,360 0 0 \$ 217,360 0 0 \$ 217,420 0 0 \$ 0 0 0 \$ 0 0 0 \$ 0 0 0 \$ 0 0 0 \$ 0 0 0 \$ 0 0 0</th><th>FACILITY NO.:</th><th>Water Rate:</th><th>0.42</th><th>\$/KL</th><th></th><th>Energy Rate:</th><th></th><th>\$/KWH</th></t<>	Gas Rate: 10.51 \$/MWH Annual Water Annual Energy & Annual Energy & ELEC Saving LPY KW KWH 268,515 ELEC ELEC ELEC ELEC ELEC KWH 26420 Saving LPY KW KWH 264,20 0 0 \$ 217,360 0 0 \$ 217,360 0 0 \$ 217,360 0 0 \$ 217,420 0 0 \$ 0 0 0 \$ 0 0 0 \$ 0 0 0 \$ 0 0 0 \$ 0 0 0 \$ 0 0 0	FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
sr Annual Water Annual Energy Saving WATER Total Saving LPY KW KWH MWH Dollar Saving VATC 186,420 0 \$77.36 \$81.84 288,515 0 1 \$188.80 \$17.86 454,935 0 0 1 \$188.80 \$199.73 5 0 0 0 \$0.00 \$0.00 \$0.00 5 0 0 0 \$0.00 \$0.00 \$0.00 457,360 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 45,326 0 0 \$0.00 \$0.00 \$0.00 45 \$0.00 \$0.00 \$0.00 \$0.00 45 \$0.00 \$0.00 \$0.00	ual Water Annual Energy Saving WATER Total Dollar Saving	ual Water Annual Energy ual Water Annual Energy ng LPY KW KWH 38,515 0 0 36,420 0 0 17,360 0 0 17,360 0 0 17,420 0 0 0 0 0 0 0 0 0 0 0	07.1	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ks ELEC ELEC GAS Saving ELEC FLEC GAS Saving Collar Saving Saving Dollar Saving Saving <	ng LPY KW KWH 38,515 0 0 36,420 0 0 64,935 0 0 17,360 0 0 17,420 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	17,360 17,360 17,360 17,420 10 10 10 10 10 10 10 10 10 1	ECO Number	Annual Water	Annual	Energy 8	Saving	WATER	Total	Total
ks 268,515 1 \$111,43 \$117.88 186,420 0 \$77.36 \$81.84 454,935 0 0 1 \$188.80 \$199.73 s 0 0 0 \$0.00 \$0.00 s 217,360 \$90.20 \$90.20 \$90.20 ts 217,360 \$61.18 \$61.18 \$61.18 ds 0 0 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 \$0.00 t 0 \$0.00 \$0.00 \$0.00 t 0 0 \$0.00 \$0.00 t 0 0 \$0.00 \$0.00	38,515 36,420 54,935 0 0 0 0 0 17,360 0 0 17,420 0 0 0 0 0 0 0 0 0 0 0 0 0 0	38,515 36,420 54,935 0 0 0 0 0 17,360 0 0 17,420 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ECO Type		ELEC	ELEC	GAS MWH	Dollar Saving	Dollar Saving	Dollars Invested
Ks 186,420 0 \$77.36 \$81.84	36,420 0 0 0 17,360 0 0 0 0 0 0 0 0 0 0 0 0 0	36,420 34,935 0 0 0 0 0 17,360 0 0 17,420 0 0 0 0 0 0 0 0 0 0 0	7-	268,515			-	\$111.43	\$117.88	\$734.40
454,935 0 0 \$188.80 \$199.73 s 0 0 \$0.00 \$0.00 s 217,360 \$0.00 \$0.00 \$0.00 ts 217,360 \$0.20 \$0.20 \$0.20 147,420 \$61.18 \$61.18 \$61.18 t 0 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 \$0.00 t 0 \$0.00 \$0.00 \$0.00 t 0 \$0.00 \$0.00 \$0.00	0 0 0 0 0 0 17,360 0 0 17,420 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 17,360 0 0 17,420 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Lavatory Sinks				0	\$77.36	\$81.84	\$979.20
s 0 \$0.00 \$0.00 \$0.00 s \$0.00 \$0.00 \$0.00 \$0.00 ts \$217,360 \$0.20 \$90.20 \$90.20 ts \$217,360 \$90.20 \$90.20 ta \$147,420 \$61.18 \$61.18 \$61.18 ds 0 \$0.00 \$0.00 \$0.00 t \$0.00 \$0.00 \$0.00 t \$0.00 \$0.00 \$0.00 t \$0.00 \$0.00 \$0.00	0 0 0 0 17,360 17,420 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 17,360 17,360 17,420 0 0 0 0	ECO1 TOTAL:	454,935	0	0	1	\$188.80	\$199.73	\$1.713.60
s	0 0 0 0 17,360 17,420 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 17,360 17,360 17,420 0 0 0 0 0 0 0	2	0			0	\$0.00	\$0.00	\$0.00
ts 217,360 0 0 0 \$0.00 \$0.00 217,360	0 0 0 0 17,360 17,360 17,420 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 17,360 17,420 0 0 0 0 0 0 0	Misc. Sinks							
ts 217,360 \$90.20 \$90.20 \$90.20 147,420 \$90.20 147,420 \$90.20 \$90.20 147,420 \$90.20 \$90.00 \$0.00	17,360 17,360 17,420 0 0 0 0 0 0 0 0	17,360 17,360 17,420 0 0 0 0 0 0	ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
tfs 217,360 \$90.20 \$90.20 147,420 147,420 147,420 147,420 147,420 147,420 147,420 147,420 148,61.18 147,420 148,61.18 148,61.1	17,360 17,420 0 0 0 0 0 0 0 0	17,360 17,420 0 0 0 0 0 0 0 0	3	217,360				\$90.20	\$90.20	\$1,561.25
217,360 \$90.20 \$90.20 147,420 \$61.18 \$61.18 147,420 \$61.18 \$61.18 ds 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00	17,360 17,420 0 0 0 0 0 0 0 0 0 0 0 0	17,360 17,420 0 0 0 0 0 0	Water Closets							
147,420 \$61.18 \$61.18 147,420 \$61.18 \$61.18 0 0 \$0.00 ds 0 0 \$0.00 t t \$0.00 \$0.00 t 0 0 \$0.00 t 0 \$0.00 \$0.00	17,420 17,420 0 0 0 0 0 0	17,420 17,420 0 0 0 0 0 0	ECO3 TOTAL:	217,360				\$90.20	\$90.20	\$1,561.25
147,420 \$61.18 \$61.18 0 0 \$0.00 ds 0 0 \$0.00 t 0 0 \$0.00 t 0 0 \$0.00 t 0 0 \$0.00	0 0 0 0 0 0 0 0	17,420 0 0 0 0 0 0 0	4	147,420				\$61.18	\$61.18	\$636.48
147,420 \$61.18 \$61.18 \$61.18 ds 0 0 \$0.00 \$0.00 ds 0 0 \$0.00 \$0.00 t t 0 0 \$0.00 t 0 0 \$0.00 \$0.00	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Urinals							
ads 0 \$0.00 \$0.00 eads 0 0 \$0.00 L: 0 0 \$0.00 \$0.00 It 1 1 1 It 0 0 0 \$0.00 L: 0 0 \$0.00 \$0.00	0 0 0	0 0 0	ECO4 TOTAL:	147,420				\$61.18	\$61.18	\$636.48
L: 0 0 0 0 \$0.00 \$0.00 line line line line line line line line	0 0 0	0 0 0	5	0			0	\$0.00	\$0.00	\$0.00
L: 0 0 0 0 \$0.00 \$0.00 Int I L: 0 0 0 0 \$0.00 \$0.00 So.00 \$0.00 \$0.00 Line District So.00 \$0.00 Line District So.00 Line	0 0 0	0 0 0	Shower Heads	-						
1 00.00 \$0.00	0 0 0	0 0 0	ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
0 0 0 \$0.00	0 0	0 0 0	9							
00.00 \$ 0.00	0 0 0	0 0	Equipment							
00.00\$ 0 0 0 0	0 0 0	0 0	Related	44.50						
00.00\$ \$0.00	0 0	0 0								
			ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

COLATION WORK SHEET 1		FY94S EEAP FI	T. KN	FY94S EEAP FT. KNOX WATER CONSERVATION STUDY	S NOI	TUDY		1002
Coperating Hours: 9 Coperating Hours: 9 Coperating Hours: 9 Coperating LPM Coperating LPM Coperating LPM Coperating Loaded Faucets 4.7 130 26 26 26 26 26 26 26 2		CALC	CULAT	ION WORK SHEET 1			DATE:	31 Oct 94
Petrofited Fixture System LPM Usage Fixtures LPM Description LPM HRS/YR Quantity 9.5 Spring Loaded Faucets 4.7 130 26 45 Install Aerators 9.5 130 2 17 Install Aerators 9.5 130 2 17 Install 3.5 GPF Flush Valve 13.2 1700 23 LPF Repair Kit LPF #FL/YR 23 5.68 Install 1.0 GPF Flush Valve 3.79 9000 13 LPM Repair Kit LPM HRS/YR 13 LPM LPM LPM HRS/YR 13 LPM LPM LPM LPM HRS/YR 13 LPM LP	1724	!		FUNCTION:	,	Training B	uilding	
LPM Description LPM HRS/YR Quantity	150			Operating Hours:	,	6		
9.5 Spring Loaded Faucets 4.7 130 26 LPM 26 45 Install Aerators 9.5 130 2 LPF #FL/YR 2 17 Install 3.5 GPF Flush Valve 13.2 1700 23 ELPF Repair Kit LPF #FL/YR 23 5.68 Install 1.0 GPF Flush Valve 3.79 9000 13 ELPM Repair Kit LPM HRS/YR 13 LPM HRS/YR 13	Existing Fixture Sys Description	System		Retrofited Fixture Syster Description	n I PM	Usage HRS/YR	Fixtures Quantity	Water Leaks Fliminated I PY
LPM 26	Public Lavatory		9.5	Spring Loaded Faucets	4.7	130	26	
45 Install Aerators 9.5 130 2			LPM		LPM		26	0
LPF #FL/YR 2 17 Install 3.5 GPF Flush Valve 13.2 1700 23 LPF Repair Kit LPF #FL/YR 23 5.68 Install 1.0 GPF Flush Valve 3.79 9000 13 LPM HRS/YR 13 LPM LPM 0	Service Sink		45	Install Aerators	9.5	130	2	
17 Install 3.5 GPF Flush Valve 13.2 1700 23 LPF #FL/YR 23 5.68 Install 1.0 GPF Flush Valve 3.79 9000 13 S.68 Install 1.0 GPF Flush Valve 3.79 9000 13 LPM HRS/YR 13 LPM HRS/YR 13 LPM C 0		1	LPF		LPF	#FL/YR	2	0
LPF #FL/YR 23	Floor Mounted Flush Valve	1	17		13.2	1700	23	
Install 1.0 GPF Flush Valve 3.79 9000 13			LPF		LPF	#FL/YR	23	0
LPM HRS/YR 13 LPM 0 0	Wall Mounted Flush Valve		5.68	i i	3.79	0006	13	
		- 1 - 2 - 2 - 2	ГРМ		LPM	HRS/YR		0
		+ + -						
		B	ГРМ		LPM		0	0
		26.4	3 - 1 3 - 1				0	0

Systems Engineering and Management Corporation, Knoxville, TN

	FY9	FY94S EEAP	P FT. K	MOX W	ER CONSER	FT. KNOX WANER CONSERVATION STUDY	2 OF 2
		Ó	ALCULAT	FION WO	CALCULATION WORK SHEET 2		
FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
! :	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ECO Number	Annual Water	Annual	Energy	Saving	WATER	Total	Total
ECO Type	Saving LPY	ELEC KW	ELEC	GAS MWH	Dollar Saving	Dollar Saving	Dollars Invested
	73			က	\$502.87	\$531.98	\$6,364.80
Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
ECO1 TOTAL:	1,211,730	0	0	က	\$502.87	\$531.98	\$6,364.80
2	553,800			_	\$2.30	\$15.60	\$19.39
Misc. Sinks							
ECO2 TOTAL:	553.800	0	o		\$2.30	\$15.60	\$19.39
3	148,580				\$61.66	\$61.66	\$1.381.10
Water Closets							
ECU3 IOIAL:	148,580				\$61.66	\$61.66	\$1,381.10
4 Urinals	221,130				\$91.77	\$91.77	\$827.42
ECO4 TOTAL:	221,130				\$91.77	\$91.77	\$827.42
5	0			0	\$0.00	\$0.00	\$0.00
Shower Heads							
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	00.08
9							
Equipment							
Related							
ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

	FY94S EEAP FT	T. KNC	. KNOX WAT R CONSERVATION STUDY	S NOI	TUDY		10
	CALC	CULAT	동			DATE:	31 Oct 94
FACILITY NO. :	1726		FUNCTION:	, i	Training Building	nilding	
Occupancy:	150		Operating Hours:	í	6		
ECO Number	Existing Fixture System	n MG I	Retrofited Fixture System	μ <u>α</u>		Fixtures Ougantity	Water Leaks
1	Public Lavatory	9.5	Spring Loaded Faucets	4.7	130	28	
Lavatory Sinks							
ECO1 TOTAL:		LPM		LPM		28	0
2	Service Sink	45	Install Aerators	9.5	130	_	
Misc. Sinks							
ECO2 TOTAL:		LPF		LPF	#FL/YR	_	0
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	1700	20	
Water Closets			Repair Kit				
ECO3 TOTAL:		LPF		LPF	#FL/YR	20	0
4	Wall Mounted Flush Valve	5.68	Install 1.0 GPF Flush Valve	3.79	0006	14	
Urinals			Repair Kit				
TATOL FOOL	20 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				2,000.		
ECO4 101AL :		E M		J S	HKS/YR	14	0
Shower Heads							
ECOR TOTAL .		MO		NO		c	
6		E		LL			
Equipment							
Related							
ECO6 TOTAL:						0	0

Systems Engineering and Management Corporation, Knoxville, TN

SASTEMS CORP PAGE 6-131

\$/KV		FY9	FY94S EEAP		MOX W	LER CONSER	FT. KNOX WARER CONSERVATION STUDY	2 OF 2
Water Rate: 0.42 \$/KL Energy Rate: \$/KV \$/KV </td <td></td> <td></td> <td>3</td> <td>ALCULA</td> <td>OM NOI</td> <td>RK SHEET 2</td> <td></td> <td></td>			3	ALCULA	OM NOI	RK SHEET 2		
Gas Rate: 10.51 \$\text{NWMH}\$ Demand Rate: \$\text{SMW}\$ \$\text{SMW}\$ \$\text{SMW}\$ \$Color of the	JITY NO.: 1726	Water Rate:	0.42	\$/KL		Energy Rate:		уж.
Annual Water Annual Water Annual Energy Saving WATER Total Saving LPY KW KWH MWH Dollar Saving Dollar Saving 1,304,940 0 3 \$541.55 \$572.90 276,900 0 3 \$541.55 \$572.90 276,900 0 1 \$1.15 \$7.80 276,900 0 1 \$1.15 \$7.80 129,200 0 1 \$1.15 \$7.80 ts 129,200 0 1 \$1.15 \$53.62 ts 129,200 0 \$53.62 \$53.62 \$53.62 ts 129,200 \$63.00 \$53.62 \$53.62 \$53.62 ds 0 \$68.83 \$98.83 \$98.83 \$98.83 0 0 \$0.00 \$0.00 \$0.00 \$0.00 ds 0 \$6.00 \$0.00 \$0.00 \$0.00		Gas Rate:	10.51	\$/MWH		Demand Rate:	6	%/KW
ks ELEC ELEC GAS Dollar Saving Light 200 Res Collar Saving MWH Dollar Saving Dollar Saving Section Section </td <td>O Number</td> <td>Annual Water</td> <td>Annual</td> <td>Energy</td> <td>Saving</td> <td>WATER</td> <td>Total</td> <td>Total</td>	O Number	Annual Water	Annual	Energy	Saving	WATER	Total	Total
ks 1,304,940 3 \$541.55 \$572.90 ks 0 \$0.00 \$0.00 \$0.00 s \$0.00 \$0.00 \$0.00 \$0.00 s \$0.00 \$0.00 \$0.00 \$0.00 s \$0.00 \$0.00 \$0.00 \$0.00 ts \$0.00 \$0.00 \$0.00 \$0.00 ts \$0.00 \$0.00 \$0.00 \$0.00 ds \$0.00 \$0.00 \$0.00 \$0.00 ts \$0.00 \$0.00 \$0.00 \$0.00 ts \$0.00 \$0.00 \$0.00 \$0.00	CO Type		ELEC KW		GAS MWH	Dollar Saving	Dollar Saving	Dollars Invested
ks 0 \$0.00 \$0.00 1,304,940 0 0 3 \$541.55 \$572.90 276,900 0 1 \$1.15 \$7.80 276,900 0 1 \$1.15 \$7.80 ts 129,200 0 1 \$53.62 \$53.62 ts 129,200 \$68.83 \$98.83 \$98.83 ts 129,200 \$0.00 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 \$0.00 t 0 \$0.00 \$0.00 \$0.00 t 0 \$0.00 \$0.00 \$0.00 t 0 \$0.00 \$0.00 \$0.00	1	9			3	\$541.55	\$572.90	\$6.854.40
1,304,940 0 0 3 \$541.55 \$572.90 276,900 0 1 \$1.15 \$7.80 276,900 0 1 \$1.15 \$7.80 45 129,200 1 \$53.62 \$53.62 45 238,140 \$98.83 \$98.83 \$98.83 5 0 \$0.00 \$0.00 \$0.00 6 0 \$0.00 \$0.00 \$0.00 6 0 \$0.00 \$0.00 \$0.00 7 \$0.00 \$0.00 \$0.00 \$0.00	atory Sinks	0			0	\$0.00	\$0.00	\$0.00
s 276,900 1 \$1.15 \$7.80 276,900 0 1 \$1.15 \$7.80 ts 129,200 \$63.62 \$53.62 \$53.62 ts 129,200 \$63.62 \$53.62 \$53.62 238,140 \$698.83 \$98.83 \$98.83 t 0 \$0.00 \$0.00 \$0.00 t \$0.00 \$0.00 \$0.00 t \$0.00 \$0.00 \$0.00 t \$0.00 \$0.00 \$0.00 t \$0.00 \$0.00 \$0.00	TOTAL:	1,304,940	0	0	3	\$541.55	\$572.90	\$6,854.40
s 276,900 0 1 \$1.15 \$7.80 ts 129,200 0 1 \$53.62 \$53.62 ts 129,200 \$53.62 \$53.62 \$53.62 238,140 \$98.83 \$98.83 \$98.83 ds 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00	2	276,900			-	\$1.15	\$7.80	\$9.70
276,900 0 1 \$1.15 \$7.80 129,200 \$53.62 \$53.62 \$53.62 129,200 \$53.62 \$53.62 \$53.62 238,140 \$98.83 \$98.83 \$98.83 0 0 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00	isc. Sinks							
ts 129,200 \$53.62 \$53.62 \$53.62	TOTAL:	276,900	0	0	-	\$1.15	\$7.80	\$9.70
ts	3	129,200				\$53.62	\$53.62	\$1,200.96
129,200 \$53.62 \$53.62 238,140 \$98.83 \$98.83 4s 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00	ter Closets							
238,140 \$98.83 \$98.83 \$98.83 238,140 \$0 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 t 0 0 \$0.00 t 1 \$0.00 \$0.00 t 0 0 \$0.00 \$0.00 t 0 0 \$0.00 \$0.00	TOTAL:	129,200				\$53.62	\$53.62	\$1,200.96
238,140 \$98.83 \$98.83 \$98.83 \$0.00	4	238,140				\$98.83	\$98.83	\$891.07
238,140	Urinals				497,85			
ds	TOTAL:	238,140				\$98.83	\$98.83	\$891.07
ds	2	0			0	\$0.00	\$0.00	\$0.00
t 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	wer Heads							
1 00.00\$ 0.00 0 0 0	TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
0 0 0 \$0.00	9							
00.00\$ 00.00 0 0	quipment							
00.00\$ 0.00\$ 0 0 0	Related							
00.0\$ 0.00\$ 0 0 0								
	TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

FACILITY NO.	1730 1730	1730 Opera	: : Em LPM 4.7 13.2 13.2 LPF LPF 13.2 LPF	9 Usage Fixt HRS/YR Que 130 #FL/YR 2200 #FL/YR 6000	ii ës
1730 FUNCTION: Training Building Building	1730 Training Building	130 Opera	: : LPM 4.7 LPF 13.2 LPF 13.2 LPF 3.79	9 Usage Fixt 130 #FL/YR 2200 #FL/YR 6000	ki ty
130 Operating Hours: 9	130 Operating Hours: 9	130 Existing Fixture System Retrofted	em LPM LPF 13.2 17.3 17.9 17.0 17.0 17.0 17.0 17.0 17.0 17.0 17.0		
Figure System Retrofited Fixture System Usage Fixtures	Nounted Flush Valve System Retrofited Fixture System Usage Fixtures	Retrofited F Description LPM Description Public Lavatory 9.5 Spring Loade ks CPM LPM Lavatory 1.2	LPM LPF 13.2 17.9		
Description LPM Description LPM HRS/YR Quantity	Description LPM HRS/YR Quantity Public Lavatory 9.5 Spring Loaded Faucets 4.7 130 2 LPM LPF LPF #FL/YR 0 Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 132 2200 17 Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 6000 17 Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 6000 17 Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 6000 17 LPM Repair Kit ILPM ILPM 17 LPM ILPM ILPM 0 Systems Engineering and Management Corporation, Knoxvil	bescription LPM Description Public Lavatory 9.5 Spring Loade LPM LPM Repair LPF Install 3.5 GPF Wall Mounted Flush Valve 5.68 Install 1.0 GPF Wall Mounted Flush Valve 5.68 Install 1.0 GPF Repair Repair LPM Repair	LPF LPF 13.2 13.2		
Public Lavatory 9.5 Spring Loaded Faucets	LPM	Hublic Lavatory 9.5 Spring Loade LPM LPM LPF Floor Mounted Flush Valve 17 Install 3.5 GPF Wall Mounted Flush Valve 5.68 Install 1.0 GPF Repair Repair Repair Repair Repair	LPM LPF 13.2 13.2 13.2 13.2 3.79	- 1	
LPM	LPF	LPM LPF LSF Floor Mounted Flush Valve 17 Install 3.5 GPF Wall Mounted Flush Valve 5.68 Install 1.0 GPF Repair Repair Repair Repair	LPF 13.2 18.2 19.2 19.2		
Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 2200 17	LPF	Floor Mounted Flush Valve 17 Install 3.5 GPF State	13.2 13.2 1.0FF		
LPF	LPF	Floor Mounted Flush Valve 17 Install 3.5 GPF Wall Mounted Flush Valve 5.68 Install 1.0 GPF Repair LPF Repair LPM	13.2 13.2 13.2 3.79		
Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 2200 17	LPF	Floor Mounted Flush Valve 17 Install 3.5 GPF Sepair Wall Mounted Flush Valve 5.68 Install 1.0 GPF Repair LPF Repair	13.2 13.2 LPF		
Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 2200 17	Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 2200 17 LPF LPF #FL/YR 17 Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 6000 17 Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 6000 17 LPM Repair Kit LPM ILPM ILPM 0 LPM LPM ILPM 0 Systems Engineering and Management Corporation, Knoxville, TN	Floor Mounted Flush Valve 17 Install 3.5 GPF ts Repair Wall Mounted Flush Valve 5.68 Install 1.0 GPF Repair Repair	13.2 LPF	•	
LPF	LPF	ts Repair Wall Mounted Flush Valve 5.68 Install 1.0 GPF Repair Repair	LPF	14	
Comparison of the comparison	Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 6000 17 Repair Kit LPM 17 LPM LPM 17 LPM Charactering and Management Corporation, Knoxville, TN	: Wall Mounted Flush Valve 5.68 Install 1.0 GPF Repair	LPF 3 79		
Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 6000 17	Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 6000 17 Repair Kit LPM 17 LPM LPM 0 LPM 0 Systems Engineering and Management Corporation, Knoxville, TN	Wall Mounted Flush Valve 5.68 Install 1.0 GPF Repair :	3 79		-
ds	LPM HRS/YR 17 LPM HRS/YR 17 LPM O O Systems Engineering and Management Corporation, Knoxville, TN	Repair:			
Company Comp	LPM HRS/YR 17 LPM 0 LPM 0 Systems Engineering and Management Corporation, Knoxville, TN				
t	LPM LPM Compared Management Corporation, Knoxville, TN	9			
## Company of the com	LPM 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0				
t	Systems Engineering and Management Corporation, Knoxville, TN	Shower Heads			
	Systems Engineering and Management Corporation, Knoxville, TN		LPM		
	Systems Engineering and Management Corporation, Knoxville, TN	9			
	Systems Engineering and Management Corporation, Knoxville, TN	Equipment Related			
	Systems Engineering and Management Corporation, Knoxville, TN				
	Systems Engineering and Management Corporation,	ECO6 TOTAL:			
			lanagement Co		(noxville, TN

Systems Engineering and Management Corporation, Knoxville, TN

Case Rate: 0.42 \$/KL	Mater Rate: 0.42 \$/KL Energy Rate: \$/KW Cas Rate: 10.51 \$/MWH Demand Rate: \$/KW Cas Rate: Cas		2 L	r 1943 EEAR	LCULAT	ALCULATION WOF	Įχ	SHEET 2	2 0 2
Cas Rate: 10.51 \$/MVVH Demand Rate: 5/MVVH Annual Energy Saving WATER Total ELEC GAS Saving LPY KW KWH MWH Dollar Saving \$40.92	late: 10.51 \$/MWH all bears are and water are later are	FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
Saving LPY KW KWH MWH Dollar Saving Saving LEC ELEC GAS Saving LEC ELEC GAS Saving Collar Saving	ng LPY KW KWH 3,210 0 0 0 0 0 2,210 0 0 0 0 0 12,120 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
Saving LPY ELEC ELEC GAS GAS Substantial Dollar Saving Substantial Subst	13,210	ECO Number	Annual Water	Annual	1. 1	Saving	WATER	Total	Total
Ks 93,210 0 \$38.68 \$40.92 Ks 0 0 \$0.00 \$0.00 93,210 0 0 \$0.00 \$0.00 142,120 0 0 \$0.00 \$0.00 192,780 \$68.98 \$58.98 \$58.98 192,780 \$60.00 \$60.00 \$60.00 10 0 0 \$0.00 10 0 \$0.00 \$0.00 10 0 \$0.00 \$0.00 10 0 \$0.00 \$0.00 10 0 \$0.00 \$0.00	3,210 0 3,210 0 0 0 0 0 0 0 0 0 0 0 0 0	ECO Type		ELEC	ELEC	GAS	Dollar Saving	Dollar Saving	Dollars Invested
ks 0 \$0.00 \$0.00 ks 0 0 \$0.00 s 0 0 \$0.00 s 0 0 \$0.00 s 0 0 \$0.00 ts 142,120 0 0 \$0.00 ts 192,780 \$58.98 \$58.98 ts 0 \$0.00 \$0.00 ds \$0.00 \$0.00 ds \$0.00 \$0.00 ds \$0.00 \$0.00	3,210 0 0 0 0 0 12,780 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1	93,210			0	\$38.68	\$40.92	\$489.60
142,120 0 0 0 \$38.68 \$40.92 0 \$0.00 \$0.00 \$0.00 142,120 0 0 0 \$58.98 \$58.98 142,120 \$58.98 \$58.98 192,780 \$80.00 \$0.00 192,780 \$60.00 \$0.00 192,780 \$60.00 \$0.00	3,210 0 0 0 0 0 0 0 12,120 0 0 12,780 0 0 0 0 0 0 0 0	Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
ts	0 0 0 0 12,120 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ECO1 TOTAL:	93,210	0	0	0	\$38.68	\$40.92	\$489.60
ts	0 0 0 0 0 0 12,120 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2	0			0	\$0.00	\$0.00	\$0.00
ts	0 0 0 0 12,120 12,120 12,780 0 0 0 0 0 0 0	Misc. Sinks							
ts	12,120 12,120 12,780 0 0 0 0 0 0 0	ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
ts	12,120 12,780 0 0 0 0 0 0 0 0	3	142,120				\$58.98	\$58.98	\$1,020.82
142,120 \$58.98 \$58.98 192,780 \$80.00 \$80.00 192,780 \$80.00 \$80.00 3s 0 \$0.00 \$0.00 4s 0 0 \$0.00 5 0 \$0.00 \$0.00	12,120 12,780 0 0 0 0 0 0 0 0 0	Water Closets							
192,780 \$80.00 \$80.00 \$80.00 \$80.00 \$80.00 \$80.00 \$0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ECO3 TOTAL:	142,120				\$58.98	\$58.98	\$1,020.82
192,780 \$80.00 \$80.00 0 \$0.00 \$0.00 15 0 0 0 \$0.00 : 0 0 0 \$0.00	0 0 0 0 0 0 0 0	4	192,780				\$80.00	\$80.00	\$1,082.02
192,780 \$80.00 \$80.00 0 \$0.00 \$0.00 15 0 0 0 \$0.00 16 0 0 \$0.00 17 0 0 0 \$0.00	0 0 0 0 0 0 0 0	Urinals							
45 00.00\$ 00 0 \$0.0000 \$0.000 \$0.000 \$0.000 \$0.000 \$0.000 \$0.000 \$0.000 \$0.000 \$0.0000	0 0 0	ECO4 TOTAL:	192,780				\$80.00	\$80.00	\$1,082.02
00.08 00.00 \$0.00	0 0 0	5 Shower Heads	0			0	\$0.00	\$0.00	\$0.00
	0 0	ECOS TOTAL:	0	0	0	o	\$0.00	\$0.00	\$0.00
	0 0 0	9							
0003	0 0 0	Related							
		FCO6 TOTAL	C	c	C		\$0.00	00 0\$	00 0
		10101				>	00.00	00.00	00.00

Systems Engineering and Management Corporation, Knoxville, TN

	FY94S EEAP FT	T. KNC	KNOX WAT & CONSERVATION STUDY	SNO	TUDY		16
	CAL	CULAT	-			DATE:	31 Oct 94
FACILITY NO. :	1810		FUNCTION:	''	Training Building	nilding	
Occupancy:	9	į	Operating Hours:	i	80		
ECO Number	Existing Fixture System Description	MG I	Retrofited Fixture System Description	H PM	Usage HRS/YR	Fixtures Quantity	Water Leaks Fliminated I PY
1 avatory Sinks	Public Lavatory	15	Spring Loaded Faucets	4.7	130	-	
- 14TOT TOOL		20					
ECOT 101AL:		» L P III		E L	in a l	-	0
Misc. Sinks							
ECO2 TOTAL:		LPF		LPF	#FL/YR	0	0
3	Tank Type (public)	11.4	Install 1.6 GPF Tank Type	9	8700	1	
Water Closets			Water Closet				
ECO3 TOTAL:		LPF	West in the control of the second of the sec	LPF	#FL/YR	1	0
4 I Irinale							
OHIBIS							
ECO4 TOTAL:		LPM		ГРМ	HRS/YR	0	0
Shower Heads							
ECO5 TOTAL:		LPM		LPM		0	0
9							
Equipment							
Кејатео							
ECO6 TOTAL:						0	0

Systems Engineering and Management Corporation, Knoxville, TN

FACILITY NO.: Wa	Water Rate:	0.4.0	171/4		L 1714		* 11 A M 1
		0.42	1 √¢		Energy Kate:		#/KVVH
G.	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ECO Number A	Annual Water	Annual	Energy S	Saving	WATER	Total	Total
	Saving LPY	ELEC KW		GAS	Dollar Saving	Dollar Saving	Dollars invested
T	35			0	\$37.14	\$39.29	\$244.80
Lavatory Sinks	0	-		0	\$0.00	\$0.00	\$0.00
ECO1 TOTAL:	89,505	0	0	0	\$37.14	\$39.29	\$244.80
2	0			0	\$0.00	\$0.00	\$0.00
Misc. Sinks							
ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
3	46,980				\$19.50	\$19.50	\$419.16
Water Closets							
ECO3 TOTAL:	46,980				\$19.50	\$19.50	\$419.16
4	0				\$0.00	\$0.00	\$0.00
Urinals							
ECO4 TOTAL:	0				\$0.00	\$0.00	\$0.00
5 Shower Heads	0			0	\$0.00	\$0.00	00.0\$
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	00'0\$
6 Equipment Related							
ECO6 TOTAL:	0	0	0		\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

	FY94S FFAP F1	T KN	T KNOX WATER CONSERVATION STILLY	S NO	TIIDY		1 62
	CALC	CULAT	CULATION WORK SHEET 1		1201	DATE:	31 Oct 94
FACILITY NO. :	1996		FUNCTION:		Training Building	uilding	
Occupancy:	35		Operating Hours:		ω	ı	
ECO Number	Existing Fixture System	(-	Retrofited Fixture System	ш	Usage	Fixtures	Water Leaks
ECO Type	Description	Md7	Description	LPM	HRS/YR	Quantity	Eliminated LPY
_	Public Lavatory	9.5	Spring Loaded Faucets	4.7	130	4	
Lavatory Sinks	Private Lavatory	9.5	Spring Loaded Faucets	4.7	130	_	
ECO1 TOTAL:		LPM		Md		3	C
2				i		,	
Misc. Sinks							
ECO2 TOTAL:		LPF		LPF	#FL/YR	0	0
က	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	3000		
Water Closets			Repair Kit				
ECO3 TOTAL:		LPF		LPF	#FL/YR	2	0
4	Wall Mounted Flush Valve	5.68	Install 1.0 GPF Flush Valve	3.79	12000		
Urinals			Repair Kit				
- TOTAT							
ECO4 101AL.		ב ב ב		ת צ	HKS/YK	4	0
Shower Heads							
ECUS IDIAL:		Z Z Z		LPM		0	0
9							
Equipment	70						
Related							
ECO6 TOTAL:						0	0

Systems Engineering and Management Corporation, Knoxville, TN

Case Rate: 0.42 \$/KL Energy Rate: 5/KW Case Rate: 10.51 \$/KWH Demand Rate: 5/KW Case Rate: 10.51 \$/KWH Demand Rate: 5/KWH Case Rate: 5/KWH MWH Demand Rate: 5/KWH MWH	TOTAL: Saving Continual Energy Continual Energy	Energy Rate: WATER \$77.36 \$71.36 \$70.00 \$0.00 \$23.66	Total Dollar Saving \$81.84 \$20.46 \$102.30 \$0.00 \$0.00	\$/KW/ Total Dollars Invested \$979.20 \$244.80 \$244.80 \$1,224.00 \$0.00 \$6.00
Demand Rate: 10.51 \$/MWH	1930 Gas Rate: 10.51 \$/MWH 2	### NATER WATER Dollar Saving \$77.36 \$77.36 \$19.34 \$96.71 \$0.00 \$23.66 \$23.66	Total Dollar Saving \$81.84 \$20.46 \$102.30 \$0.00 \$0.00	\$/KW Total Dollars Invested \$979.20 \$244.80 \$1,224.00 \$0.00 \$300.24
O Number Annual Water Annual Energy Saving WATER Total CO Type Saving LPY KWH MWH Dollar Saving Dollar Saving CO Type Saving LPY KWH MWH Dollar Saving S81.84 Itory Sinks 46,605 0 0 \$70.06 \$0.00 Sc. Sinks 0 0 0 \$0.00 \$0.00 Sc. Sinks 0 0 0 \$0.00 \$0.00 Sc. Sinks 0 0 \$0.00 \$0.00 \$0.00 TOTAL: 57,000 \$23.66 \$23.66 \$23.66 TOTAL: 57,000 \$23.66 \$23.66 \$37.65 Juinals 0 0 \$0.00 \$0.00 Sc. TOTAL: 0 0 \$0.00 \$0.00	O Number Annual Water Annual Energy State CO Type Saving LPY KW KWH 1 186,420 Itory Sinks 46,605 CO TAL: 233,025 0 2 0 0 3 57,000 0 TOTAL: 57,000 0 4 90,720 0 Urinals 0 0 5 0 0 5 0 0 TOTAL: 90,720 0 5 0 0 TOTAL: 90,720 0 5 0 0 6 0 0	WATER Dollar Saving \$77.36 \$19.34 \$96.71 \$9.00 \$0.00 \$23.66	Total Dollar Saving \$81.84 \$20.46 \$20.46 \$0.00 \$0.00 \$23.66	Total Dollars Invested \$979.20 \$244.80 \$1,224.00 \$0.00 \$0.00
Saving LPY KWH MWH Dollar Saving LPC ELEC GAS S77.36 \$81.84 L605	CO Type Saving LPY KW KWH ELEC ELEC ELEC 1 186,420 KWH KWH 1 186,420 0 0 2 0 0 0 2 0 0 0 2 0 0 0 Sc. Sinks 57,000 0 0 er Closets 57,000 0 0 Urinals 90,720 0 0 5 0 0 0 6 0 0 0 TOTAL: 90,720 0 0 5 0 0 0 6 0 0 0	\$77.36 \$77.36 \$19.34 \$96.71 \$0.00 \$0.00	\$81.84 \$81.84 \$20.46 \$102.30 \$0.00 \$23.66	\$979.20 \$244.80 \$1,224.00 \$0.00 \$300.24
1 186,420 0 \$77.36 \$81.84 Itory Sinks 46,605 0 1 \$96,71 \$102.30 2 0 0 1 \$96,71 \$102.30 2 0 0 0 \$0.00 \$0.00 sc. Sinks 0 0 0 \$0.00 \$0.00 sc. Sinks 0 0 \$0.00 \$0.00 \$0.00 sc. Sinks 3 57,000 \$0.00 \$0.00 \$0.00 ar Closets 57,000 \$23.66 \$23.66 \$23.66 \$23.66 TOTAL: 90,720 \$37.65 \$37.65 \$37.65 \$37.65 \$0.00 wer Heads 0 0 \$0.00	1 186,420 Itory Sinks 46,605 2 0 0 2 0 0 2 0 0 Sc. Sinks 0 0 0 3 57,000 0 0 ar Closets 57,000 0 0 TOTAL: 57,000 0 0 TOTAL: 90,720 0 0 wer Heads 0 0 0 TOTAL: 0 0 0 TOTAL: 0 0 0 TOTAL: 0 0 0	\$77.36 \$19.34 \$96.71 \$0.00 \$23.66	\$81.84 \$20.46 \$102.30 \$0.00. \$23.66	\$979.20 \$244.80 \$1,224.00 \$0.00 \$0.00 \$300.24
ttory Sinks 46,605 0 \$19.34 \$20.46 TOTAL: 233,025 0 1 \$96.71 \$102.30 sc. Sinks 0 0 0 \$0.00 \$0.00 scr Closets \$23.66 \$23.66 \$23.66 \$23.66 toTAL: 50,720 \$37.65 \$37.65 \$37.65 Urinals 5 0 \$0.00 \$0.00 \$0.00 wer Heads 0 0 \$0.00 \$0.00 \$0.00 for 6 0 0 \$0.00 \$0.00 follower 6 0 0 0 \$0.00 follower 6 0 0 0 \$0.00 <td>ttory Sinks 46,605 TOTAL: 233,025 0 0 2 0 0 0 sc. Sinks 0 0 0 TOTAL: 0 0 0 er Closets 57,000 0 0 Urinals 4 90,720 0 0 TOTAL: 90,720 0 0 wer Heads 0 0 0 TOTAL: 0 0 0 TOTAL: 0 0 0</td> <td>\$19.34 \$96.71 \$0.00 \$0.00 \$23.66</td> <td>\$20.46 \$102.30 \$0.00 \$0.00 \$23.66</td> <td>\$244.80 \$1,224.00 \$0.00 \$0.00 \$300.24</td>	ttory Sinks 46,605 TOTAL: 233,025 0 0 2 0 0 0 sc. Sinks 0 0 0 TOTAL: 0 0 0 er Closets 57,000 0 0 Urinals 4 90,720 0 0 TOTAL: 90,720 0 0 wer Heads 0 0 0 TOTAL: 0 0 0 TOTAL: 0 0 0	\$19.34 \$96.71 \$0.00 \$0.00 \$23.66	\$20.46 \$102.30 \$0.00 \$0.00 \$23.66	\$244.80 \$1,224.00 \$0.00 \$0.00 \$300.24
TOTAL: 233,025 0 1 \$96.71 \$102.30 2 0 0 \$0.00 \$0.00 sc. Sinks 0 0 0 \$0.00 TOTAL: 0 0 0 \$0.00 er Closets 57,000 \$23.66 \$23.66 er Closets \$23.66 \$23.66 \$23.66 Johnals \$37.65 \$37.65 \$37.65 Urinals TOTAL: \$0,720 \$37.65 \$37.65 wer Heads 0 0 \$0.00 \$0.00 wer Heads 0 \$0.00 \$0.00 e 6 \$0.00 \$0.00 glated \$0.00 \$0.00 \$0.00	TOTAL: 233,025 0 0 2 0 0 0 Sc. Sinks 0 0 0 TOTAL: 0 0 0 TOTAL: 57,000 0 0 TOTAL: 57,000 0 0 TOTAL: 90,720 0 0 Follower Heads 0 0 0 TOTAL: 0 0 0 TOTAL: 0 0 0	\$96.71 \$0.00 \$0.00 \$23.66	\$102.30 \$0.00 \$0.00 \$23.66	\$1,224.00 \$0.00 \$0.00 \$300.24
2 0 \$0.00 \$0.00 sc. Sinks 0 0 \$0.00 \$0.00 TOTAL: 0 0 \$0.00 \$0.00 ar Closets \$23.66 \$23.66 \$23.66 er Closets \$27,000 \$23.66 \$23.66 TOTAL: \$0,720 \$37.65 \$37.65 Urinals COTAL: \$0,720 \$0.00 wer Heads 0 \$0.00 \$0.00 Wer Heads 0 \$0.00 \$0.00 Iuipment \$0.00 \$0.00 \$0.00 Columbia \$0.00 \$0.00 \$0.00	2 0 0 0 0 TOTAL: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	\$0.00 \$0.00 \$23.66	\$0.00 \$0.00 \$23.66	\$0.00 \$0.00 \$300.24
\$ 57,000	ts	\$0.00 \$23.66	\$0.00 \$23.66	\$0.00 \$300.24
ts 57,000	ts 57,000 0 0 0 0 1	\$0.00 \$23.66	\$0.00 \$23.66	\$0.00 \$300.24
ts 57,000 \$23.66 \$23.66 \$23.66 \$23.66 \$23.66 \$23.66 \$23.66 \$23.66 \$23.66 \$23.66 \$23.66 \$23.66 \$23.66 \$23.66 \$23.66 \$23.66 \$23.66 \$23.65	ts	\$23.66	\$23.66	\$300.24
ts	57,000 90,720 90,720 0 ds 0 0 0 0 0 0			
57,000 \$23.66 \$23.66 90,720 \$37.65 \$37.65 90,720 \$37.65 \$37.65 ds 0 0 \$0.00 t 0 0 \$0.00 t 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00	57,000 90,720 0 0 ds 0 0 0 0			
90,720 \$37.65 \$37.65 \$37.65 \$40.00 \$	90,720 90,720 0 ds 0 0 0 0	\$23.66	\$23.66	\$300.24
90,720 \$37.65 \$3	90,720 0 ds 0 0 0	\$37.65	\$37.65	\$254.59
ds	90,720 0 ds 0 0 0			
ds 0 0 \$0.00 \$0.00 ft	0 0 0 sp	\$37.65	\$37.65	\$254.59
t	0 0 0	\$0.00	\$0.00	\$0.00
1		00.0\$	\$0.00	\$0.00
000\$	71			
00 08 0 0 0	Related			
00 0 0 0 0				
00:00	ECO6 TOTAL: 0 0 0 0	\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

	EVOAS EEAD E	TKN	EVOAS EEAD ET KNOY WAY	O NO.	<u>کرا :</u>		1
	CAL	CULAT	CALCULATION WORK SHEET 1			DATE:) [당
FACILITY NO. :	1997		FUNCTION:		Training Building	nilding	
Occupancy:	40		Operating Hours:		12		
ECO Number ECO Type	Existing Fixture System Description	LPM	Retrofited Fixture System Description	m L P M	Usage HRS/YR	Fixtures	Water Leaks Eliminated LPY
1 Lavatory Sinks	Public Lavatory	15	Spring Loaded Faucets	4.7	130	4	
ECO1 TOTAL		<u> </u>		MO			c
2				E	-	+	
Misc. Sinks							
ECO2 TOTAL:		LPF		LPF	#FL/YR	0	0
3 Water Closets	Tank Type (public)	11.4	Install 1.6 GPF Tank Type	9	3600	4	
Water Closers			אמופו סוספנו				
ECO3 TOTAL:		LPF	a de la companya de l	LPF	#FL/YR	4	0
7	Wall Mounted Flush Valve	2.68	Install 1.0 GPF Flush Valve	3.79	28000	2	
Orinals			Repair Kit				
ECO4 TOTAL:		LPM		LPM	HRS/YR	2	0
5							
Shower Heads	-						
ECO5 TOTAL:		LPM		LPM		0	0
9							
Equipment							
Related							
ECO6 TOTAL:						0	0
	-						

Systems Engineering and Management Corporation, Knoxville, TN

	L Y S	FY94S EEAP CAI	LCULAT	CULATION WOR) 쏫	EK CONSERVATION STUDY SHEET 2	2 OF 2
FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ECO Number	Annual Water	Annual	Energy S	Saving	WATER	Total	Total
ECO Type	 Saving LPY	WX ELEC KW	ELEC KWH	GAS MWH	Dollar Saving	Dollar Saving	Dollars Invested
7	358,020			-	\$148.58	\$157.18	\$979.20
Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
ECO1 TOTAL:	358,020	0	0	-	\$148.58	\$157.18	\$979.20
2	0			0	\$0.00	\$0.00	\$0.00
Misc. Sinks							
ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
3	77,760				\$32.27	\$32.27	\$240.19
Water Closets							
ECO3 TOTAL:	77,760				\$32.27	\$32.27	\$240.19
4	105,840				\$43.92	\$43.92	\$127.30
Urinals							
ECO4 TOTAL:	105,840				\$43.92	\$43.92	\$127.30
5	0			0	\$0.00	\$0.00	\$0.00
Snower Heads							
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
6 Equipment							
Kelated							
ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
SYSTEMS CORP	ORP			Systems	Engineering and	Management Corp	Systems Engineering and Management Corporation, Knoxville, TN

Systems Engineering and Management Corporation, Knoxville, TN

	FY94S EEAP FT	Y X X	. KNOX WATER CONSERVATION STUDY	SNO	TUDY		100
	CAL	CULAT	CALCULATION WORK SHEET 1			DATE:	31 Oct 94
FACILITY NO.:	1998		FUNCTION:		Admin. Fac.	ن.	
Occupancy:	4		Operating Hours:	'	80		
ECO Number	Existing Fixture System		Retrofited Fixture System	ш	Usage	Fixtures	Water Leaks
ECO Type	Description	LPM	Description	LPM	HRS/YR	Quantity	Eliminated LPY
	Public Lavatory	9.5	Spring Loaded Faucets	4.7	130	2	
Lavatory Sinks	Public Lavatory	23	Spring Loaded Faucets	4.7	130	2	
ECO1 TOTAL:		LPM		LPM		4	0
2							
Misc. Sinks							
ECO2 TOTAL:		LPF		LPF	#FL/YR	0	0
က	Tank Type (publi)	11.4	Install 1.6 GPF Tank Type	9	1560	3	
Water Closets			Water Closet				
- A T O T		-		L -	* C/V		•
ECOS IOIAL:		ברר. היי		7	#FLITK		0
4	Wall Mounted Flush Valve	5.68	Install 1.0 GPF Flush Valve	3.79	2900	2	
Orinais			Nepall Nit				
ECO4 TOTAL:		LPM		LPM	HRS/YR	2	0
5							
Shower Heads							
					A STATE OF THE STA	(
ECUS IOIAL:		L F		L Z		0	0
٥							
Eduipment							
Kelated							
ECO6 TOTAL:	· · · · · · · · · · · · · · · · · · ·					0	0

Systems Engineering and Management Corporation, Knoxville, TN

Mater Rate: 0.42 \$/KL Energy Rate: 10.51 \$/MWH Demand Rate: 10.51 \$/MWH Demand Rate: \$/KW Saving LPY KW MWH MWH MWH MWH \$138.68 \$40.92 \$40.92 \$303,810 \$10.00 \$133.38 \$133.38 \$133.			CAI	LCULAT	OM NO	CULATION WORK SHEET 2		
Annual Water Annual Energy Saving Annual Water ELEC ELE	•	Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
Annual Water Annual Benergy Saving WATER Total Saving LPY KWH MWH Dollar Saving WATER Total 93,210 0 0 \$38.68 \$40.92 303,810 1 \$126.08 \$40.92 397,020 0 1 \$126.08 \$174.30 0 0 0 \$0.00 \$0.00 25,272 \$10.49 \$10.49 \$10.49 25,272 \$41.55 \$41.55 10,962 \$4.55 \$4.55 0 0 \$0.00 \$0.00 0 \$0.00 \$0.00		ate:	10.51	\$/MWH		Demand Rate:		\$/KW
ks Saving LPY RW KWH RWH Dollar Saving B3,210 ELEC FLEC GAS \$30.8 G8 \$40.92 \$40.92 ks 303,810 1 \$126.08 \$40.92 s 303,810 1 \$126.08 \$133.38 s 0 0 1 \$126.08 \$174.30 s 0 0 0 \$0.00 \$0.00 s 0 0 \$0.00 \$0.00 ts 25,272 \$10.49 \$10.49 ts 10,962 \$4.55 \$4.55 0 0 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00		al Water	Annual		saving	WATER	Total	Total
ks 93,210 0 \$38,68 \$40,92 ks 303,810 1 \$126.08 \$40,92 397,020 0 1 \$164.76 \$174.30 s 0 0 0 \$0.00 \$0.00 s 0 0 0 \$0.00 \$0.00 ts 25,272 \$10,49 \$10,49 \$10,49 to 0 0 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 t \$0.00 \$0.00 \$0.00 t \$0.00 \$0.00 \$0.00			ELEC KW	ELEC KWH	GAS	Dollar Saving	Dollar Saving	Dollars Invested
ks 303,810		15			0	\$38.68	\$40.92	\$489.60
397,020 0 0 1 \$164.76 s 0 0 0 0 \$0.00 25,272 0 0 0 \$10.49 10,962 \$4.55 10,962 \$4.55 ds 0 0 0 \$50.00 tt		3,810				\$126.08	\$133.38	\$489.60
s 0 0 \$0.00 s 0 0 0 \$0.00 ts 25,272 \$10.49 25,272 \$10.49 10,962 \$41.55 0 0 0 \$0.00 ds 0 0 0 \$50.00		7,020	0	0	-	\$164.76	\$174.30	\$979.20
ts		0			0	\$0.00	\$0.00	\$0.00
ts 25,272 0 0 0 \$0.00 25,272 \$10.49 25,272 \$10.49 10,962 \$4.55 0 \$0.00 ds 0 0 0 \$0.00	sc. Sinks							
ts		0	0	0	0	\$0.00	\$0.00	\$0.00
ts		,272				\$10.49	\$10.49	\$1,257.48
25,272 \$10.49 10,962 \$4.55 10,962 \$4.55 0 \$0.00 ds 0 \$0.00 t 0 \$0.00 t t \$0.00	ter Closets							
10,962 \$4.55 \$4.55		,272				\$10.49	\$10.49	\$1,257.48
10,962 \$4.55 0 \$0.00 ds 0 \$0.00 0 0 \$0.00 t t		,962				\$4.55	\$4.55	\$127.30
10,962 \$4.55 0 0 \$0.00 ds 0 0 \$0.00 t t								
ds 0 0 \$0.00 ds 0 0 0 \$0.00 t t		,962				\$4.55	\$4.55	\$127.30
00.0\$ 0 0 0 0 t		0			0	\$0.00	\$0.00	\$0.00
t 0 0 0 \$0.00	200							
		0	0	0	0	\$0.00	\$0.00	\$0.00
Related Related	9							
	quipment Polated					According to the state of the s		
	Notation 1							
ECO6 TOTAL: 0 0 0 0 80 00		C	c	c	C	00 0\$	00 0\$	00 O\$
	ш		, 	,	,		00:00	00.04

Systems Engineering and Management Corporation, Knoxville, TN

	EVOAS EEAD	CT VA	OV MATERIAL		YOUT		
	1 1 343 EEAT 1 1 0 1 1 0 1 1 1 1 1 1 1 1 1 1 1 1 1		IN ATION WORK CHICK A LICE STODY	0 2 2	1001		
		CALCULA	ULATION WORK SHEET 1			DATE:	31 Oct 94
FACILITY NO. :	2010		FUNCTION:	• ,	Training Building	nilding	
Occupancy:	100		Operating Hours:	'	8		
ECO Number	Existing Fixture System		Retrofited Fixture System	m	Usage	Fixtures	Water Leaks
ECO Type	Description	LPM	Description	LPM	HRS/YR	Quantity	Eliminated LPY
_	Public Lavatory	15	Spring Loaded Faucets	4.7	130	19	
Lavatory Sinks							
TOT TOT				:		,	
ECO1 IOIAL:	7.7.7.3	LPM		LPM		19	0
2							
Misc. Sinks							
TOTO TOTAL.			6、 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.				
ECUZ IOIAL.	The second of the second	 		LPF	#FL/YR	0	0
က	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	3000	15	
Water Closets			Repair Kit				
		\dashv					
ECO3 TOTAL:	では、大学のでは、10mmで	7. e.	BACKSON CONTRACTOR SERVICE CONTRACTOR	LPF	#FL/YR	15	0
4	Wall Mounted Flush Valve	2.68	Install 1.0 GPF Flush Valve	3.79	6500	21	
Urinals			Repair Kit				
ECO4 TOTAL:	では、「大きない」という。 (1) 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	LPM		LPM	HRS/YR.	21	0
2							
Shower Heads							
- TOT 1001	Therefore the state of the stat						
ECUS IOIAL:		L L L		E L	# 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0	0
9							
Equipment							
Related							
ECO6 TOTAL:	1、1のでは、1					0	0
	1						

Systems Engineering and Management Corporation, Knoxville, TN

FY94S EEAP FT. KNOX WALER CONSERVATION STUDY 2 OF 2	Water Rate: 0.42 \$/KL Energy Rate: \$/KWH	Gas Rate: 10.51 \$/MWH Demand Rate: \$/KW	Annual Water Annual Energy Saving WATER Total Total	Saving LPY KW KWH MWH Dollar Saving Dollar Saving Dollars Invested	1,700,595 4 \$705.75 \$746.60	00.0\$ 0.00\$ 0	1,700,595 0 0 4 \$705.75 \$746.60 \$4,651.20	00.0\$ 00.00		00.0\$ 0.00\$ 0.00 0 0	171,000 \$70.97 \$70.97 \$900.72		171,000 \$70.97 \$70.97 \$900.72	257,985 \$1,336.61		257,985 \$1,336.61	00.0\$ 0.00\$		00.0\$ 00.0\$ 0 0 0 0				00 04 00 04
	Water Rate:	Gas Rate:	Annual Wa		33	0	1,700,595	0		0	171,000		171,000	257,985		257,985	0		0				c
	FACILITY NO.:)))	ECO Number	ECO Type	1	Lavatory Sinks	ECO1 TOTAL:	2	Misc. Sinks	ECO2 TOTAL:	3	Water Closets	ECO3 TOTAL:	4	Urinals	ECO4 TOTAL:	5	Shower Heads	ECO5 TOTAL:	9	Equipment	Related	- I V I O O O L

Systems Engineering and Management Corporation, Knoxville, TN

	FY94S FFAP FI	K K N	F KNOX WATER CONSERVATION STILLY	NOL	TIIDY		1 2
	CAL	CULAT	CALCULATION WORK SHEET 1			DATE:	31 Oct 94
FACILITY NO.:	2020		FUNCTION:	•	Training Building	uilding	
Occupancy:	40		Operating Hours:	·	80		
ECO Number	Existing Fixture System		Retrofited Fixture System		Usage	Fixtures	Water Leaks
ECO Type	Description	LPM	Description	LPM	HRS/YR	Quantity	Eliminated LPY
_	Public Lavatory	9.5	Spring Loaded Faucets	4.7	130	7	
Lavatory Sinks	Public Lavatory	15	Spring Loaded Faucets	4.7	130	2	
ECO1 TOTAL:		LPM		LPM		6	0
2							
Misc. Sinks							
FCO2 TOTAL		- <u>1</u> 0		10	#FI WP	c	
10101	Clost Mountain Eluch Volvo	47	0110/14011 3 G O E Elisability	45.0	1200	0	
Water Closets	רוסטו ואוסתווופת רותצוו עמועם	/	Repair Kit	7.61	2000	0	
ECO3 TOTAL:	Carling of March 1985	: FPF:	· · · · · · · · · · · · · · · · · · ·	LPF	#FL/YR	8	0
4	Wall Mounted Flush Valve	5.68	Install 1.0 GPF Flush Valve	3.79	3120	11	
Urinals			Repair Kit				
ECO4 TOTAL:	经济教会 医含义的变形 医二克克氏征	ILPM	· 李子子 (1) 李子子子 (1) 《基本教授 (1) 中国	LPM	HRS/YR	11	0
5							
Shower Heads							
ECO5 TOTAL:		LPM		LPM		°	0
9							
Equipment							
Related							
ECO6 TOTAL:		13. 41.				0	0

Systems Engineering and Management Corporation, Knoxville, TN

	FY9	FY94S EEAP FT. KNOX WA	P FT. KI	MOX W		ER CONSERVATION STUDY	2 OF 2
		7	LCULAT	TION WO	CALCULATION WORK SHEET 2		
FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ECO Number	Annual Water	Annual	Energy	Saving	WATER	Total	Total
ECO Type	Saving LPY	ELEC	ELEC KWH	GAS MWH	Dollar Saving	Dollar Saving	Dollars invested
1	ĕ			_	\$135.39	\$143.22	\$1,713.60
Lavatory Sinks	179,010			0	\$74.29	\$78.59	\$489.60
ECO1 TOTAL:	505,245	0	0	-	\$209.68	\$221.81	\$2,203.20
2	0			0	\$0.00	\$0.00	\$0.00
Misc. Sinks							
ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
3	39,520				\$16.40	\$16.40	\$480.38
Water Closets							
ECO3 TOTAL:	39,520				\$16.40	\$16.40	\$480.38
4	64,865				\$26.92	\$26.92	\$700.13
Urinals							
ECO4 TOTAL:	64,865				\$26.92	\$26.92	\$700.13
5	0			0	\$0.00	\$0.00	\$0.00
Shower Heads				į			
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
9							
Equipment							
Related							
ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
SYSTEMS CORP	ORP			Systems	Engineering and	Management Cor	Systems Engineering and Management Corporation, Knoxville, TN

Systems Engineering and Management Corporation, Knoxville, TN

	FY94S EEAP FT	X X X	F. KNOX WAT & CONSERVATION STUDY	SNO	TUDY		7
	CALC	SULAT				DATE:	31 Oct 94
FACILITY NO. :	2339		FUNCTION:	·	Admin. Fac.	ರ .	
Occupancy:			Operating Hours:		8		
ECO Number	Existing Fixture System		Retrofited Fixture System	m	1	Fixtures	Water Leaks
ECO Type	Description	LPM	Description	LPM	HRS/YR	Quantity	Eliminated LPY
1	Public Lavatory	9.5	Spring Loaded Faucets	4.7	130	3	
Lavatory Sinks							
TOT ATOT		2		-	7	G	
ECO1 101AL:		LYM		٦ آ		3	0
2							
Misc. Sinks							
FCO2 TOTAL .		- DF		I DE	#EI ND	c	
1002 1001		1,7		- C			
S Water Closets	Floor Mounted Flush Valve	<u> </u>	Install 3.5 GPF Flush Valve Repair Kit	13.2	0062	9	
ECO3 TOTAL:		LPF		LPF	#FL/YR	9	0
4	Wall Mounted Flush Valve	5.68	Install 1.0 GPF Flush Valve	3.79	2500	3	
Urinals			Repair Kit				
ECO4 TOTAL:		LPM		LPM	LPM HRS/YR	3	0
5							
Shower Heads							
ECO5 TOTAL:		LPM		LPM	A STATE OF THE STA	0	0
9							
Equipment							
Related							

ECO6 TOTAL:		10 mm	The second secon			0	0

Systems Engineering and Management Corporation, Knoxville, TN

\$/MWH \$/MWH 0 0 0 0		FΥ9	FY94S EEAP CAI		M XON	LCULATION WORK SHEET 2	FT. KNOX WARE CONSERVATION STUDY CULATION WORK SHEET 2	2 OF 2
Gas Rate: 10.51 \$/MWH Annual Water Annual Energy Saving LPY KW KWH 139,815 0 0 0 139,815 0 0 0 57,000 14,175 0 0 0 S	FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
Annual Water Annual Energy Saving LPY KW KWH 139,815 0 0 0 0 0 0 0 0 0	666	Gas Rate:		\$/MWH		Demand Rate:		\$/KW
ks	ECO Number	Annual Water		Energy	Saving	WATER	Total	Total
ks 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ECO Type			ELEC	GAS	Dollar Saving	Dollar Saving	Dollars Invested
ks 0 \$0.00 \$0.00 139,815 0 0 \$6.00 139,815 0 0 \$6.00 10 0 0 \$0.00 57,000 \$0.00 \$0.00 4s \$7,000 \$23.66 \$23.66 57,000 \$23.66 \$23.66 \$5.88 4t \$5.88 \$5.88 \$5.88 4t \$0.00 \$0.00 \$0.00 4c \$0.00 \$0.00 \$0.00 4c \$0.00 \$0.00 \$0.00 5 CORP \$0.00 \$0.00	1	<u> </u>			0	\$58.02	\$61.38	\$734.40
139,815 0 0 0 0 0 0 57,000 0 57,000 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
ts 57,000 0 0 0 0 ds 0 0 0 0 0 0 0 0 0 0 0 0 0	ECO1 TOTAL:	139,815	0	0	0	\$58.02	\$61.38	\$734.40
ts 57,000 0 0 0 57,000 14,175 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Misc Sinks	0			0	\$0.00	\$0.00	\$0.00
ts 57,000 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0								
ts	ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
57,000 14,175 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3 Water Closets	57,000				\$23.66	\$23.66	\$360.29
ads	ECO3 TOTAL:	57,000				\$23.66	\$23.66	\$360.29
ads 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	4 Urinals	14,175				\$5.88	\$5.88	\$190.94
ads 0 0 0 0 ii 0 0 0 0 S CORP	ECO4 TOTAL:	14,175				\$5.88	\$5.88	\$190.94
nt 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	5 Shower Heads	0			0	\$0.00	\$0.00	\$0.00
0 0 0	ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
0 0	6 Equipment Related							
	ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
	SYSTEMS C	ORP			Systems	Engineering and	Management Cor	poration, Knoxville, T

Systems Engineering and Management Corporation, Knoxville, TN

Retrof Retrof		FY94S EEAP F1	T. KN	F. KNOX WAT & CONSERVATION STUDY	S NO	TUDY		162
Compact Comp		CAL	CULAT	ION WORK SHEET 1			DATE:	31 Oct 94
Existing Fixture System Retrofited Fixture System Usage Fixtures System Description LPM Description LPM HRSYR Quantity	FACILITY NO. :	2352		FUNCTION:	•	Training B	uilding	
Existing Fixture System Retrofited Fixture System Usage Fixtures	Occupancy:	40		Operating Hours:	•	10		
Description LPM Description LPM HRS/YR Quantity	ECO Number			Retrofited Fixture Syster	E	Usage	Fixtures	Water Leaks
Public Lavatory 9.5 Spring Loaded Faucets 4.7 130 2	ECO Type		LPM	Description		HRS/YR	Quantity	Eliminated LPY
LPM	1	Public Lavatory	9.5	Spring Loaded Faucets	4.7	130	2	
LPM	Lavatory Sinks							
LPF	ECO4 TOTAL		NO.		DAM		r	
Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 3000 2 S	ECOI IOIAL.		Z L		<u> </u>		7	O
Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 3000 2	2							
Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 3000 2	Misc. Sinks							
Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 3000 2	ECO2 TOTAL:		LPF		LPF	#FL/YR		0
LPF	3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	3000		
LPF	Water Closets			Repair Kit				
LPF #FLYR 2								
Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 10400 1	ECO3 TOTAL:		LPF		LPF		2	0
Comparison	4	Wall Mounted Flush Valve	2.68		3.79	10400	1	
Company Comp	Urinals			Repair Kit				
Company Comp								
Company Comp	ECO4 TOTAL:		LPM		LPM	HRS/YR		0
Company Comp	5							
	Shower Heads							
	- TATO	Market Control of the	10		-			•
	ECUS IOIAL.		EL L		LFIW		5	
	٥.	de de la construcción de la cons		and the state of t				
	Equipment							
	Related							
	FCOR TOTAL .				\$ \$			c
	ECCO IOIAE.							

Systems Engineering and Management Corporation, Knoxville, TN

	FΥ9	FY94S EEAP		W XON	ER CONSER	FT. KNOX WATER CONSERVATION STUDY	2 OF 2
		CAI		OM NOI	LCULATION WORK SHEET 2		
FACILITY NO.: 2352	Water Rate:	0.42	\$/KL		Energy Rate:		#WWH
1	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ECO Number	Annual Water	Annual		Saving	WATER	Total	Total
ECO Type	Saving LPY	ELEC	ELEC	GAS	Dollar Saving	Dollar Saving	Dollars Invested
	93,210			0	\$38.68	\$40.92	\$489.60
Lavatory Sinks	0		The state of the s	0	\$0.00	\$0.00	\$0.00
ECO1 TOTAL:	93.210	0	c	c	\$38 68	\$40.92	\$489 GO
2	0			0	\$0.00	\$0.00	\$0.00
Misc. Sinks					-		
1 + OT 0 O O L			,	· ·			
ECO2 TOTAL:	0	0	0	٥	\$0.00	\$0.00	\$0.00
က	22,800				\$9.46	\$9.46	\$120.10
Water Closets							
ECO3 TOTAL.	22 800				97 04	\$ 0.46	6420 40
101AL.	22,000				43.40	43.40	\$120.10
4 Urinals	19,656				\$8.16	\$8.16	\$63.65
ECO4 TOTAL:	19,656				\$8.16	\$8.16	\$63.65
5	0			0	\$0.00	\$0.00	\$0.00
Shower Heads							
ECOF TOTAL	c	c			000		•
ECOS 101AL.	0				90.00	\$0.00	\$0.00
Fairingent	THE PROPERTY OF THE PROPERTY O						
Related							
ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

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		NEW YORK	XG: 120 1		4 6
	FY94S EEAP FI. KNO	AP FI. KNOX WARE CONSERVATION STUDY	NSIUDY	-	3
	CALCULATIO	CALCULATION WORK SHEET 1		DATE:	31 Oct 94
ACILITY NO. :	2368	FUNCTION:	Admin. & Training	raining	

Operating Hours: Occupancy:

ω

ECO Number	Existing Fixture System		Retrofited Fixture System	E	Ileane	Fixtures	Water eaks
DOLLAR COL		- 2 -	December of the control of the contr		Season I	2,7	Timing I DV
ECO Iype	Describtion	LFW	Describtion	LTM	HK3/1K	Quantity	Eliminated LPT
-	Public Lavatory	9.5	Spring Loaded Faucets	4.7	130	5	
Lavatory Sinks	Public Lavatory	23	Spring Loaded Faucets	4.7	130	12	
ECO1 TOTAL:		LPM		LPM		17	0
2							
Misc. Sinks							
ECO2 TOTAL:		LPF		LPF	#FL/YR	0	0
	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	5720	11	
Water Closets			Repair Kit				
ECO3 TOTAL:		TPF	等 医医疗 對於與對於自己發表與自然主義 法的	LPF	#FL/YR	11	0
4	Wall Mounted Flush Valve	5.68	Install 1.0 GPF Flush Valve	3.79	8000	17	-
Urinals			Repair Kit				
ECO4 TOTAL:		LPM	。 1971年《 建物 》(1974年),1984年	LPM	HRS/YR	17	0
5							
Shower Heads							
-							
ECO5 TOTAL:		LPM		LPM		0	0
9							
Equipment							
Related							
ECO6 TOTAL:						0	0

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Systems Engineering and Management Corporation, Knoxville, TN

	EVG	EV94S FEAD	1 -	ET KNOX W	ER CONSER	ER CONSERVATION STIINY	2 OE 2
		CA	LCULAT	ION WO	LCULATION WORK SHEET 2		
FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
000	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ECO Number	Annual Water	Annual		Saving	WATER	Total	Total
ECO Type	Saving LPY	ELEC KW	ELEC KWH	GAS MWH	Dollar Saving	Dollar Saving	Dollars Invested
1	No.	ļ		-	\$96.71	\$102.30	\$1,224.00
Lavatory Sinks	1,822,860			4	\$756.49	\$800.28	\$2,937.60
ECO1 TOTAL:	2,055,885	0	0	5	\$853.19	\$902.58	\$4,161.60
2	0			0	\$0.00	\$0.00	\$0.00
Misc. Sinks							
ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
3	239,096				\$99.22	\$99.22	\$660.53
Water Closets							
ECO3 TOTAL:	239,096				\$99.22	\$99.22	\$660.53
4	257,040				\$106.67	\$106.67	\$1,082.02
Urinals							
ECO4 TOTAL:	257,040				\$106.67	\$106.67	\$1,082.02
5	0			0	\$0.00	\$0.00	\$0.00
Shower Heads							
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
9							
Equipment							
Related							
ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
SYSTEMS CORP	ORP			Svetame	Engineering and	1 Management Cor	Sveteme Engineering and Management Corporation Knovville TN
				o) stellis			Polation, michaelie, i

Systems Engineering and Management Corporation, Knoxville, TN

		FY94S EEAP FT. KNOX WA	XN.	X WA R CONSERVATION STUDY	S NOI	TUDY		1 2
Signature System Petrofited Fixture System Description LPM HRS/TR Quantity		CALC	ULATI	교			DATE:	31 Oct 94
Sample System Retrofited Fixture System Description LPM Description LPM Description LPM RRS/NR Quantity Public Lavatory 9.5 Spring Loaded Faucets 4.7 130 2	FACILITY NO. :	2369		FUNCTION:	• 1	Training B	uilding	
Existing Fixture System Retrofited Fixture System Usage Fixtures	Occupancy:	30		Operating Hours:	ı	8		
Description LPM Description LPM HRS/YR Quantity	ECO Number	Existing Fixture System		Retrofited Fixture Syster	ш	Usage	Fixtures	Water Leaks
Public Lavatory 9.5 Spring Loaded Faucets 4.7 130 4	ECO Type	Description	LPM	Description		HRS/YR	Quantity	Eliminated LPY
Public Lavatory 15 Spring Loaded Faucets 4.7 130 2	1	Public Lavatory	9.5	Spring Loaded Faucets	4.7	130	4	
LPM	Lavatory Sinks	Public Lavatory	15	Spring Loaded Faucets	4.7	130	2	
LPF	ECO1 TOTAL:		LPM		Μd		g	C
Pior Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 2200 7	2							
LPF	Misc. Sinks							
Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 2200 7 2200								
Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 2200 7	ECO2 TOTAL:		LPF		LPF	#FL/YR	,	0
Wall Mounted Flush Valve LPR #FLVR 7 Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 8000 5 Repair Kit LPM HRS/YR 5 S LPM HRS/YR 5 C LPM HRS/YR 5	3		17	Install 3.5 GPF Flush Valve	13.2	2200	7	
Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 8000 5 LPM Repair Kit LPM HRS/YR 5 LPM LPM LPM 0	Water Closets			Repair Kit				
Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 8000 5 S Repair Kit LPM LPM HRS/YR 5 LPM LPM LPM 0								
Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 8000 5 Repair Kit LPM Repair Kit 5 S LPM Repair Kit 5 S LPM Repair Kit 5 S Repair Kit 6 6 S Repair Kit 7 7 S Repair Kit 8 7 S Repair Kit 9 8 S Repair Kit 9 9 <	ECO3 TOTAL:		LPF		LPF	#FL/YR		0
S	4		5.68	i 1	3.79	8000	5	
S C C C C C C C C C C C C C C C C C C C	Urinals			Repair Kit				
S CONTRACTOR OF THE CONTRACTOR								
	ECO4 TOTAL:		LPM		LPM	HRS/YR		0
	2							
	Shower Heads							
	ECO5 TOTAL:		LPM		LPM	Section of the sectio		0
	9							
	Equipment							
	Related			_				
	· IATOT	2000年代の日本の日本の日本の日本の日本の日本の日本の日本の日本の日本の日本の日本の日本の				Charles Carlo		(
	ECU6 IUIAL:				34 37 4			0

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	FY94S EEAP FT.	Z X X	KNOX WA R CONSERVATION STUDY	SNOI	TUDY		1 2
	CALCI	SULAT	$\mathbf{\alpha}$			DATE:	
FACILITY NO. :	2385		FUNCTION:		Bowling Alley	ley	
Occupancy:	Varies		Operating Hours:		14	,	
ECO Number	Existing Fixture System		Retrofited Fixture System	m	Usage	Fixtures	Water Leaks
ECO Type		_	Description	LPM	HRS/YR	Quantity	Eliminated LPY
7	Public Lavatory	9.5	Spring Loaded Faucets	4.7	365		
Lavatory Sinks			and Mixing Valve				
ECO1 TOTAL		MG		Md	\$ \$	7	C
2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Service Sink	45	Inetall Aeratore	ر د	182		
Misc. Sinks		2	וופגמון אכן מנסופ	5	70.	-	
ECO2 TOTAL:		LPF	그 이 사람 가장 속이 열었다. 상품에 걸음하는데 아이	LPF	Ŧ	1	0
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	3650		
Water Closets			Repair Kit				
					_	_	
ECO3 TOTAL:	STORY STATE OF STATE STATES OF STATE	LPF		LPF	#		0
4	Wall Mounted Flush Valve	5.68	Install 1.0 GPF Flush Valve	3.79	3650	3	
Urinals			Repair Kit				
ECO4 TOTAL:		LPM		LPM	HRS/YR	3	0
5							
Shower Heads							
ECO5 TOTAL:		LPM		LPM		0	0
9							
Equipment							
Related							
- VECT						c	c
ECU6 IOIAL:		12				٥	0

	FY94S	4S EEAI	P FT. K	W XON	ER CONSER	EEAP FT. KNOX WA ER CONSERVATION STUDY	2 OF 2	
		CA	LCULAT	IOM NOI	CALCULATION WORK SHEET 2			1
FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH	
9	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW	-
ECO Number	Annual Water	Annual	Energy 9	Saving	WATER	Total	Total	I
ECO Type	Saving LPY	WX ELEC	ELEC	GAS	Dollar Saving	Dollar Saving	Dollars Invested	
1	915,968			2	\$380.13	\$402.13	\$1,713.60	
Lavatory Sinks								1 1
ECO1 TOTAL:	915,968	0	0	2	\$380.13	\$402.13	\$1,713.60	P
2	387,660			1	\$1.61	\$1.70	\$9.70	
Misc. Sinks								1 1
FCO2 TOTAL .	387.660	C	O	-	\$1.61	\$1.70	02 6\$	
3	97,090				\$40.29	\$40.29	\$420.34	4
Water Closets								1 1
ECO3 TOTAL:	97,090				\$40.29	\$40.29	\$420.34	
4	20,696				\$8.59	\$8.59	\$190.94	•
Urinals								1 1
ECO4 TOTAL:	20,696				\$8.59	\$8.59	\$190.94	
2	0			0	\$0.00	\$0.00	\$0.00	
Shower Heads								1
			ļ	ļ				•
ECO5 TOTAL:	0	0	0	٥	\$0.00	\$0.00	\$0.00	
•			_		_			

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\$0.00

\$0.00

0

0

ECO6 TOTAL:

Equipment

Related

\$0.00

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	FY94S EEAP FT. KNOX WA	Ť. KN	DX WATER CONSERVATION STUDY	S NOI	TUDY		1
	CALC	CULAT	뙷			DATE:	31 Oct 94
FACILITY NO.:	2425		FUNCTION:	'	Training Building	uilding	
Occupancy:	20		Operating Hours:	·	10		
ECO Number	Existing Fixture System	1 1.	Retrofited Fixture System	٤	Usage	Fixtures	Water Leaks
ECO Type	Description	LPM	Description	LPM	HRS/YR	Quantity	Eliminated LPY
1 Constant Sinks	Public Lavatory	9.5	Spring Loaded Faucets	4.7	130	2	
Lavatory Sillins							
ECO1 TOTAL:		LPM		LPM		2	0
2	Service Sink	15	Install Aerators	9.5	130	-	
Misc. Sinks							
ECO2 TOTAL:		LPF		LPF	#FL/YR	1	0
3	Tank Type (public)	11.4	Install 1.6 GPF Tank Type	9	3000	3	
Water Closets			Water Closet				
ECO3 TOTAL:		LPF		LPF	#FL/YR	3	0
4	Wall Mounted Flush Valve	5.68	Install 1.0 GPF Flush Valve	3.79	0290	2	
Urinals			Repair Kit				
ECO4 TOTAL:		LPM		LPM	HRS/YR	2	0
5							
Shower Heads							
FCO5 TOTAL		Md -		Md		c	c
9						,	
Equipment							
Related							
ECO6 TOTAL:						0	0

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42,900 0 \$0.18 \$0.19 \$9.70 42,900 0 0 \$0.18 \$0.19 \$9.70 48,600 0 0 \$20.17 \$1,257.48 24,570 \$10.20 \$10.20 \$127.30 24,570 \$10.20 \$10.20 \$127.30 0 \$0.00 \$0.00 \$0.00 \$0.00
00.0\$ 00.0\$ 0 0

Systems Engineering and Management Corporation, Knoxville, TN

	FY94S EEAP FT. KNOX WA	- KN	DX WA R CONSERVATION STUDY	S NO	TUDY		1 2
	CALCI	SULAT				DATE:	31 Oct 94
FACILITY NO. :	2426		FUNCTION:	,	Training Building	uilding	
Occupancy:	28		Operating Hours:	•	10		
ECO Number	Existing Fixture System		Retrofited Fixture System	L L	Usage	Fixtures	Water Leaks
ECO Type		_	Description	LPM	HRS/YR	Quantity	Eliminated LPY
1	Public Lavatory	9.5	Spring Loaded Faucets	4.7	130	4	
Lavatory Sinks							
1			の 基本を見いて対象 できたい これの make alone with the Soliday (A			•	•
ECO1 IOIAL:		LPM		LPM		4	0
2							
Misc. Sinks							
ECO2 TOTAL:		LPF		LPF	#FL/YR	0	0
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	4000	5	
Water Closets			Repair Kit				
ECO2 TOTAL .	(金) 本の (の 都の) の 「 の 知 の (金)	1.05	では、このでは、一般には、中央のでは、これには、一般を発展を発展しません。 これには、一般のでは、一般のできた。	1.0	. 4CI. √D		
ECOS IOIAL.		בנו	,这是我们的,我们就是我想到一个人的人,但是我们的人,也是我们是我们的人,也是我们的人,也可以可以		W171#		0
4 Tripale	Wall Mounted Flush Valve	5.68	Install 1.0 GPF Flush Valve	3.79	20000	4	
0							
ECO4 TOTAL:	対域の かいかん 一次の 一年 かいまい こうし	LPM	京 1 日本 1 日	LPM	LPM HRS/YR	4	0
5							
Shower Heads							
COOF TOTAL	SE A STANLEY TO A SECTION TO SERVE THE SECTION OF SECTION SECT	* PYCH:	から かい 一般主義 ではな はいまかい さん 一般 なっとくか ごしは いる 記録	MO		c	C
FCC3 1011.							
Fairinment							
Related							
ECO6 TOTAL:	The second secon		・ 100mmの 100mm 100	1. P. C.		0	0

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		AC EEA	D ET 12	W ACIA		CV046 EEAD ET VNOV WED CONSERVATION STILLS	
		CA	LCULAT	ON NOI	CALCULATION WORK SHEET 2	TOOLS NOTIFY	2 0 7 2
FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
9	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ECO Number	Annual Water	Annual	Energy	Saving	WATER	Total	Total
ECO Type	Saving LPY	ELEC	ELEC KWH	GAS MWH	Dollar Saving	Dollar Saving	Dollars Invested
-	186,420			0	\$77.36	\$81.84	\$979.20
Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
ECO1 TOTAL:	186,420	0	0	0	\$77.36	\$81.84	\$979.20
2	0			0	\$0.00	\$0.00	\$0.00
Misc. Sinks							
ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
3	76,000				\$31.54	\$31.54	\$300.24
Water Closets							
ECO3 TOTAL:	76,000				\$31.54	\$31.54	\$300.24
4	151,200				\$62.75	\$62.75	\$254.59
Urinals							
ECO4 TOTAL:	151,200				\$62.75	\$62.75	\$254.59
2	0			0	\$0.00	\$0.00	\$0.00
Shower Heads							
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
9							
Equipment							
Related							
TATOT OCCU	•	·	(,			
ECO6 IOIAL:	0	0	0	٥	\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

PUNCTION WORK SHEET 1		FY94S EEAP FT.	T. KN	KNOX WA R CONSERVATION STUDY	S NOI	TUDY		1 2
Existing Fixture System Coperating Hours: Statute System Coperating Hours: Statute System Coperating Hours: Statute System Coperating Hours: Coperating Hours: Coperating Hours: Coperating Hours: Coperating Hours: Coperating Hours: Coperating House: Coperat		CAL	CULAT	ION WORK SHEET 1			DATE:	31 Oct 94
Existing Fixture System Retrofited Fixture System Description LPM Description LPM LPM Description LPM HRS/YR Quantity LPM Description LPM HRS/YR Quantity LPM LPM	FACILITY NO.:	2608		FUNCTION:	71	Admin/La	fundry	
Existing Fixture System Retrofited Fixture System Description LPM Description LPM HRS/YR Quantity Public Lavatory 13 Spring Loaded Faucets 4.7 130 2	Occupancy:	2		Operating Hours:	'	æ	1	
Public Lavatory	ECO Number	Existing Fixture Systen		Retrofited Fixture Syster	l u	Usage	Fixtures	Water Leaks
Public Lavatory 13 Spring Loaded Faucets 4.7 130 2	ECO Type	Description		Description	LPM	HRS/YR	Quantity	Eliminated LPY
LPM LPM LPM 2 2 2 2 2 2 2 2 2	_	Public Lavatory	13	Spring Loaded Faucets	4.7	130	2	
LPM LPM Service Sink 11 Install Aerators 9.5 130 1	Lavatory Sinks							
Service Sink	TOTA TOTAL.				MQ		,	C
Service Sink 11 Install Aerators 9.5 130 1	ECOI IOIAL.					007	1	
Laundry Sink 15 Install Aerators 9.5 130 1	2	Service Sink	7,		ن د د	130	- -	
Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 2080 2 2	Misc. Sinks	Laundry Sink	15	Install Aerators	9.5	130	-	
Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 2080 2	ECO2 TOTAL .		1d -		LPF	#FLWR		0
S L'OUR MOUITEUR TUSIN VAIVE L'EPR REPAIR KIT L'EPR #FL/YR 2 L'EPR #FL/YR 2 L'EPR #FL/YR 0 L'EPR #FL/YR 0 L'EPR #FL/YR 0	10171	Clost Mountaid Elitab Value	17	Inctall 3 & CDE Flush Valve	12.0	2080		
LPF #FL/YR 2 LPM HRS/YR 0 S LPM HRS/YR 0 LPM HRS/YR 0 LPM HRS/YR 0 LPM HRS/YR 0	Water Closets	רוסטו ואוסמוונפט רומאוו עמועפ	,	Repair Kit	7.01	0007	7	
Character Che #FL/YR 2								
LPM HRS/YR 0 S LPM HRS/YR 0 CPM HRS/YR 0	ECO3 TOTAL:		LPF		LPF	#FL/YR		0
LPM HRS/YR 0 S LPM HRS/YR 0 LPM O O O O O O O O O O O O O O O O O O O	4							
LPM HRS/YR 0 S LPM HRS/YR 0 LPM O O O O O O O O O O O O O O O O O O O	Urinals							
S								
S	ECO4 TOTAL:		LPM		LPM	HRS/YR		0
	5							
	Shower Heads							
	FCOR TOTAL .		Md		Md		C	О
	9000							
	Equipment							
	Related							
	ECO6 TOTAL:							0

Systems Engineering and Management Corporation, Knoxville, TN

TY NO.: Water Rate: 0.42 \$/KL Energy Rate: 2608 Gas Rate: 10.51 \$/MWH Demand Rate: D Number Annual Water Annual Energy Saving WATER Total D Number Annual Water Annual Energy Saving WATER Total D Number Annual Water Annual Energy Saving WATER Total D Saving LPY KWH MWH Dollar Saving \$6.00 TOTAL: 147,810 0 0 \$6.134 \$64.89 D TOTAL: 147,800 0 0 \$6.05 \$0.05 Sc. Sinks 42,900 0 0 \$6.134 \$64.89 TOTAL: 15,808 0 0 \$0.05 \$0.05 TOTAL: 54,600 0 \$6.56 \$6.56 \$6.56 TOTAL: 0 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 TOTAL: 0 0 \$0.00 \$0.00 \$0.00 \$0.00	Color Colo	
Gas Rate: 10.51 \$/MWH Demand Rate: Fundal Water Annual ELEC ELEC ELEC GAS Dollar Saving Total Saving LPY KWH MWH Dollar Saving Dollar Saving Dollar Saving 147,810 0 0 \$6.1.34 \$6.4.89 147,810 0 0 \$0.00 \$0.00 11,700 0 \$0.05 \$0.05 11,700 0 \$0.18 \$0.19 54,600 0 \$0.18 \$0.19 15,808 \$6.56 \$6.56 \$6.56 15,808 \$6.56 \$6.56 \$6.56 15,808 \$6.56 \$6.56 \$6.00 0 \$0.00 \$0.00 \$0.00 42,900 0 \$6.56 \$6.56 42,908 \$6.56 \$6.56 \$6.56 45,808 \$6.56 \$6.00 \$0.00 0 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00	Gas Rate: 10.51 \$\text{MWVH}\$ Demand Rate: \$\text{MVMTER}\$ \$\text{Total}\$ \$\text{SKW}\$ FLEC ELEC GAS WATER Total \$\text{Total}\$ \$\text{SW}\$ \$\text{Total}\$ \$\text{SW}\$ \$\text{Total}\$ \$\text{SW}\$ \$\text{Total}\$ \$\text{SW}\$ \$\text{Total}\$ \$\text{SW}\$	\$/KWH
O Number Annual Water Annual ELEC ELEC GAS ELEC GAS WATER 1 Saving LPY KW KWH MWH RWH MWH Dollar Saving 147,810 0 \$61.34 1 147,810 0 0 \$61.34 1 1,700 0 0 \$61.34 2 11,700 0 \$6.18 sc. Sinks 42,900 0 \$6.18 TOTAL: 54,600 0 \$6.23 TOTAL: 15,808 \$6.56 ac Closets \$6.56 Jrinals \$6.00 TOTAL: 0 \$0.00 5 0 \$0.00 Jrinals 0 \$0.00 5 0 \$0.00 6 0 \$0.00	O Number Annual Water Annual Energy Saving WATER Total 20 Type Saving LPY KW KWH MWH Dollar Saving P64.89 20 Type Saving LPY KW KWH MWH Dollar Saving P64.89 147,810 0 0 \$0.00 \$0.00 \$0.00 \$0.00 10 TOTAL: 147,810 0 0 \$0.05 \$0.05 \$0.05 2 C. Sinks 42,900 0 0 \$0.18 \$0.19 \$0.05 3 Sinks 42,900 0 0 \$0.18 \$0.19 \$0.00 10 At 0 0 \$0.24 \$0.05 \$0.00 \$0.00 10 At 0 0 \$0.00 \$0.00 \$0.00 \$0.00 10 At 0 0 \$0.00 \$0.00 \$0.00 \$0.00 10 At 0 0 \$0.00 \$0.00 \$0.00 \$0.00 10 Bipment 10 Bipment 0 0 <td< th=""><th>\$/KW</th></td<>	\$/KW
Saving LPY ELEC ELEC GAS KWH KWH KWH MWH Dollar Saving 50.00 CAN BE CO TO	CO Type Saving LPY KWH KWH MWH LOUIar Saving LPY KWH KWH MWH LOUIar Saving LPY KWH KWH MWH LOUIAR S61.34 Dollar Saving S61.34 S64.89 147,810 0 0 \$61.34 \$64.89 10TAL: 147,810 0 0 \$61.34 \$64.89 2 11,700 0 0 \$6.05 \$0.05 5c. Sinks 42,900 0 0 \$0.18 \$0.19 TOTAL: 54,600 0 0 \$6.56 \$6.56 4 0 0 \$0.05 \$0.00 \$0.00 Jrinals 50.00 \$0.00 \$0.00 \$0.00 \$0.00 5 0 0 0 \$0.00 \$0.00 \$0.00 4 0 0 0 \$0.00 \$0.00 \$0.00 5 0 0 0 \$0.00 \$0.00 \$0.00 5 0 0 0 \$0.00 \$0.00 \$0.00 5 0 0 0 \$0.00 \$0.00 <th>Total</th>	Total
1 147,810 0 \$61.34 tory Sinks 0 0 \$0.00 TOTAL: 147,810 0 0 \$61.34 2 11,700 0 \$61.34 sc. Sinks 42,900 0 0 \$6.05 TOTAL: 54,600 0 0 \$6.56 er Closets 15,808 \$6.56 TOTAL: 0 \$0.00 Jrinals \$6.56 TOTAL: 0 \$0.00 wer Heads 0 \$0.00 Formal 0 \$0.00 TOTAL: 0 \$0.00	1 tory Sinks 0 \$61.34 \$64.89 tory Sinks 0 \$0.00 \$0.00 TOTAL: 147,810 0 0 \$61.34 \$64.89 TOTAL: 147,810 0 0 \$61.34 \$64.89 Sc. Sinks 42,900 0 0 \$0.05 \$0.05 TOTAL: 54,600 0 0 \$0.18 \$0.19 TOTAL: 54,600 0 0 \$0.23 \$0.24 TOTAL: 0 \$0.00 \$0.00 \$0.00 Jrinals 50.00 \$0.00 \$0.00 \$0.00 Wer Heads 0 0 \$0.00 \$0.00 \$0.00 Feature 0 0 \$0.00 \$0.00 \$0.00 Wer Heads 0 0 \$0.00 \$0.00 \$0.00 Feature 0 0 \$0.00 \$0.00 \$0.00 Feature 0 0 \$0.00 \$0.00 \$0.00 Featu	Dollars invested
tory Sinks 0 \$0.00 TOTAL: 147,810 0 0 \$61.34 2 11,700 0 \$0.05 sc. Sinks 42,900 0 0 \$0.05 sc. Sinks 42,900 0 \$0.05 TOTAL: 54,600 0 0 \$0.23 ar Closets 15,808 \$6.56 TOTAL: 0 \$0.00 Jrinals \$0.00 \$0.00 Wer Heads \$0.00 \$0.00 TOTAL: 0 \$0.00 5 0 \$0.00 6 0 \$0.00	tory Sinks 0 \$0.00 TOTAL: 147,810 0 0 \$0.05 2 11,700 0 \$0.18 2 11,700 0 \$0.18 sc. Sinks 42,900 0 0 \$0.18 TOTAL: 54,600 0 0 \$0.18 TOTAL: 15,808 \$6.56 4 0 \$0.00 Jrinals \$0.00 \$0.00 Wer Heads 0 \$0.00 Formula 0 \$0.00 Wer Heads 0 \$0.00 Formula \$0.00 \$0.00 Selection \$0.00 Formula \$0.00 Selection \$0.00 Selection \$0.00 TOTAL: 0 \$0.00 Selection \$0.00 Selection \$0.00 Selection \$0.00 Selection \$0.00 Selection \$0.00 Selection	\$489.60
TOTAL: 147,810 0 0 \$61.34 2 11,700 0 \$0.05 sc. Sinks 42,900 0 \$0.18 TOTAL: 54,600 0 0 \$0.23 st Closets 15,808 \$6.56 \$6.56 ar Closets 15,808 \$6.56 \$6.00 Jrinals 0 \$0.00 \$0.00 TOTAL: 0 \$0.00 \$0.00 F 0 \$0.00 \$0.00 wer Heads 0 \$0.00 \$0.00 for 6 \$0.00 \$0.00	TOTAL: 147,810 0 0 0 \$61.34 2	\$0.00
2 11,700 0 \$0.05 sc. Sinks 42,900 0 \$0.18 TOTAL: 54,600 0 0 \$0.23 a TOTAL: 15,808 \$6.56 TOTAL: 0 \$0.00 Jrinals 0 \$0.00 TOTAL: 0 \$0.00 F 0 \$0.00 wer Heads 0 \$0.00 F 0 \$0.00 TOTAL: 0 \$0.00 5 0 \$0.00 6 \$0.00 \$0	2 11,700 0 50.05 sc. Sinks 42,900 0 50.18 TOTAL: 54,600 0 0 \$6.56 ar Closets TOTAL: 15,808 \$6.56 4 0 \$0.00 Jrinals 0 \$0.00 Wer Heads 0 \$0.00 Wer Heads 0 \$0.00 Iuipment 6 \$0.00 Related 0 0 \$0.00 TOTAL: 0 0 \$0.00 TOTAL: 0 0 \$0.00 TOTAL: 0 \$0.00	\$489.60
\$6.50 \$6.50 \$6.50 \$6.50 \$6.50 \$6.50 \$6.50 \$6.50 \$6.50 \$6.00 <t< td=""><td>42,900 0 0 \$0.18</td><td>\$9.70</td></t<>	42,900 0 0 \$0.18	\$9.70
54,600 0 0 \$0.23 15,808 \$6.56 15,808 \$6.56 15,808 \$6.56 0 \$0.00 0 \$0.00 ds 0 \$0.00 0 \$0.00 ds 0 \$0.00	54,600 0 0 \$0.23 15,808 \$6.56 15,808 \$6.56 15,808 \$6.56 0 \$0.00 0 \$0.00 ds 0 \$0.00 t 0 \$0.00 t 0 \$0.00 t 0 \$0.00 t 0 \$0.00	\$9.70
15,808 \$6.56 15,808 \$6.56 15,808 \$6.56 0 \$0.00 0 \$0.00 ds 0 0 \$0.00	ts	\$19.39
15,808 \$6.56 0 \$0.00 ds 0 0 \$0.00	ts	\$120.10
15,808 \$6.56 0 \$0.00 ds 0 0 \$0.00	15,808 \$6.56 0 \$0.00 ds 0 0 0 \$0.00 t 0 \$0.00	
00.0\$ 0 0 0 0 sp	ds	\$120.10
00.0\$ 0 0 0 0 sp	ds 0 0 0 \$0.00 t t 0 0 0 0 \$0.00	\$0.00
00.0\$ 0 0 0 0 sp	ds 0 0 0 \$0.00 t \$0.00 t \$0.00	
00.0\$ 0 0 0 \$0.00 sp	ds 0 0 \$0.00 \$0.00 t	\$0.00
00.00\$ 0 0 0 0 sp	ds 0 0 0 \$0.00 tt	\$0.00
0 0 0 0 0 0	t \$0.00 t	
9	t 0 0 0 0 \$0.00	\$0.00
	0000\$ 0 0 0	
Equipment	00.00\$ 0 0 0	
Related	00.00\$ 0 0 0 0	
	00.0\$ 0 0 0	
ECO6 TOTAL: 0 0 0 \$0.00 \$0.00		\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

	H GVHH SP6AH	L	EY94S FEAP ET KNOX W. FR CONSERVATION STILLY	L'S NO	VOL		2
	1 1 2 2		CIII ATION WORK SHEET 4			חוד ארם	29 00 400
. ON YEL HOVE	2723		HOLEONIE		Scien		10000
	11 40			J	2		
Occupancy:	2 Meals / Day		Operating Hours:	881	8am to 2 am	_	
ECO Number	Existing Fixture System		Retrofited Fixture System		Usage	Fixtures	Water Leaks
ECO Type		LPM		PM	HRS/YR	Quantity	Eliminated LPY
	Lavatory Faucets	9.5	Spring Loaded Faucets	4.7	730	7	
Lavatory Sinks							
ECO1 TOTAL:		LPM		LPM		7	0
2							
Misc. Sinks							
ECO2 TOTAL:		LPF		LPF	#FL/YR	0	0
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	10950	7	
Water Closets			Repair Kit				
ECO3 TOTAL .		ם ב		L	מא ושי	1	
ECO3 101AL .			1	7 7	#FLITR	ļ	
4 Urinals	vvali iviourited Fiusri valve	2.00	Ristall 1.0 GPF Flush valve Repair Kit	3.73	00801	2	
ECO4 TOTAL:		LPM		LPM	HRS/YR	3	0
5	The state of the s						
Snower Heads							
ECO5 TOTAL:		LPM		LPM		0	0
9	3 Comp. Sink (1 faucets)	22.7	Install Aerators	9.5	1075	-	
Equipment	2 Comp. Sink (1 faucets)	17	Install Aerators	9.5	1075	2	
Related							
ECO6 TOTAL:						3	0
SYSTEMS CORP	ORP	System	Systems Engineering and Management Corporation,	nent Co	rporation		Knoxville, TN

Systems Engineering and Management Corporation, Knoxville, TN

	FY9	FY94S EEAP FT. KNOX W	P FT. KI	W XON	FER CONSER	FER CONSERVATION STUDY	2 OF 2
		ζ C	LCULAT	IOM NOI	CALCULATION WORK SHEET 2		
FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		#WWH
	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ECO Number	Annual Water	Annual	Energy 9	Saving	WATER	Total	Total
ECO Type	Saving LPY	ELEC	ELEC	GAS	Dollar Saving	Dollar Saving	Dollars Invested
_	1,831,935			3	\$760.25	\$789.96	\$1,428.00
Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO1 TOTAL:	1,831,935	0	0	3	\$760.25	\$789.96	\$1,428.00
2	0			0	\$0.00	\$0.00	\$0.00
Misc. Sinks	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
3	291,270				\$120.88	\$120.88	\$350.28
Water Closets	0				\$0.00	\$0.00	\$0.00
	0				\$0.00	\$0.00	\$0.00
ECO3 TOTAL:	291,270				\$120.88	\$120.88	\$350.28
4	62,086				\$25.77	\$25.77	\$159.12
Urinals	0				\$0.00	\$0.00	\$0.00
	0				\$0.00	\$0.00	\$0.00
ECO4 TOTAL:	62,086				\$25.77	\$25.77	\$159.12
5	0			0	\$0.00	\$0.00	\$0.00
Shower Heads	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
9	851,400			1	\$3.53	\$17.34	\$8.08
Equipment	967,500			1	\$4.02	\$19.70	\$16.16
Related	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO6 TOTAL:	1,818,900	0	0	3	\$7.55	\$37.04	\$24.24

Systems Engineering and Management Corporation, Knoxville, TN

				S	Ъ																						
10.2	29 Oct 94			Water Leaks	Eliminated LPY			0			0				0			c			0					0	
	DATE:	ф		Fixtures	Quantity			0			0	2			2	-		-	-		0					0	
Yau-		Maintenance	8	Usage	HRS/YR						#FL/YR	3000			#FL/YR	18250		- dy/2dH									
ON ST		~	1	u	LPM			LPM			LPF	13.2			LPF	3.79		Md	- - -		LPM						
FT. KNOX WAER CONSERVATION STUDY	LCULATION WORK SHEET 1	FUNCTION:	Operating Hours:	Retrofited Fixture System	Description							Install 3.5 GPF Flush Valve	Repair Kit			Install 1.0 GPF Flush Valve	Kepair Kit										
T. KN	CULAT				LPM			LPM			LPF	17		1	LPF	5.68		MG -	i		LPM						
FY94S EEAP F		2764	10	Existing Fixture System	Description		TO THE THEORY OF THE THE THEORY OF THE THE THEORY OF THE THEORY OF THE THEORY OF THE THE THEORY OF THE THE THE THEORY OF THE THEORY OF THE THEORY OF THE THEORY OF THE THE THEORY OF THE THEORY OF THE THEORY OF THE					Floor Mounted Flush Valve				Wall Mounted Flush Valve											
		FACILITY NO. :	Occupancy:	ECO Number	ECO Type	-	Lavatory Sinks	ECO1 TOTAL:	2	Misc. Sinks	ECO2 TOTAL:	3	Water Closets	1	ECO3 IOIAL:	4	Urinais	FCOA TOTAL .	5	Shower Heads	ECO5 TOTAL:	9	Equipment	Related		ECO6 TOTAL:	

Systems Engineering and Management Corporation, Knoxville, TN

	FY9	4S EEA	P FT KI	W XON	FR CONSER	FY94S EEAP FT. KNOX W FR CONSFRVATION STILLY	2 OE 2
		73	ALCULAT	ION WO	CALCULATION WORK SHEET 2		
FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		#WM/\$
† 1	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ECO Number	Annual Water	Annua	Energy (Saving	WATER	Total	Total
ECO Type	Saving LPY	ELEC KW	ELEC KWH	GAS MWH	Dollar Saving	Dollar Saving	Dollars Invested
	0			0	\$0.00	\$0.00	\$0.00
Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO1 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
2	0			0	00.0\$	\$0.00	\$0.00
Misc. Sinks	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
3	22,800				\$9.46	\$9.46	\$120.10
Water Closets	0				\$0.00	\$0.00	\$0.00
	0				\$0.00	\$0.00	\$0.00
ECO3 TOTAL:	22,800				\$9.46	\$9.46	\$120.10
4	34,493				\$14.31	\$14.31	\$63.65
Urinals	0				\$0.00	\$0.00	\$0.00
	0				\$0.00	\$0.00	\$0.00
ECO4 TOTAL:	34,493				\$14.31	\$14.31	\$63.65
5	0			0	00.0\$	\$0.00	\$0.00
Shower Heads	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
9	0			0	\$0.00	\$0.00	\$0.00
Equipment	0			0	\$0.00	\$0.00	\$0.00
Related	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

	FY94S FFAP FT KNOX WA	FR CONSFRVATION STILLY	SNOIT	TIIDY		102
	CALC	ΝÆ			DATE:	29 Oct 94
FACILITY NO.:	2770	FUNCTION:		Maintenance	eo.	
Occupancy:		Operating Hours:	io	8		
ECO Number	Existing Fixture System	Retrofited Fixture System	tem	Usage	Fixtures	Water Leaks
ECO Type		LPM Description	LPM	HRS/YR	Quantity	Eliminated LPY
	Wash Fountain					39840
Lavatory Sinks						
ECO1 TOTAL:		LPM	LPM		0	39840
2	Service Sink					39840
Misc. Sinks						
FCO2 TOTAL:			Jd I	#FL/YR	0	39840
3	Floor Mounted Flush Valve	17 Install 3.5 GPF Flush Valve	-	3000	Ĺ	
Water Closets		Repair Kit	-			
ECO3 TOTAL:		LPF	LPF	#FL/YR	12	0
4	Wall Mounted Flush Valve	5.68 Install 1.0 GPF Flush Valve	9 3.79	18250	6	
Urinals		Repair Kit				
- TOT 4 TOT						
ECO4 10 IAL:			7 7 8	HKS/TK	S	D
Shower Heads						
Ollower Fleads						
ECO5 TOTAL:		LPM	LPM		0	0
9						
Equipment						
Related						
FCOR TOTAL .					c	c
ECC0 101AL .)	0
SYSTEMS CORP		Sections Engineering and Manager) tuomo	orporatio	1	INT OIL
,) <u> </u>		Systems Engineering and Management Corporation,) Hallia	Orporation		Anoxylle, IN

Systems Engineering and Management Corporation, Knoxville, TN

	FY9	FY94S EEAP	1 -	W XON	ER CONSER	FT. KNOX W ER CONSERVATION STUDY	2 OF 2
		CAI	1	IOM MOI	CULATION WORK SHEET 2		
FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		#WX/\$
2	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ECO Number	Annual Water	Annual	Energy :	Saving	WATER	Total	Total
ECO Type	Saving LPY	ELEC	ELEC KWH	GAS	Dollar Saving	Dollar Saving	Dollars Invested
1	39,840			0	\$16.53	\$17.59	\$0.00
Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO1 TOTAL:	39,840	0	0	0	\$16.53	\$17.59	\$0.00
2	39,840			0	\$0.17	\$1.12	\$0.00
Misc. Sinks	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO2 TOTAL:	39,840	0	0	0	\$0.17	\$1.12	\$0.00
3	136,800				\$56.77	\$56.77	\$720.58
Water Closets	0				\$0.00	\$0.00	\$0.00
	0				\$0.00	\$0.00	\$0.00
ECO3 TOTAL:	136,800				\$56.77	\$56.77	\$720.58
4	310,433				\$128.83	\$128.83	\$572.83
Urinals	0				\$0.00	\$0.00	\$0.00
	0				\$0.00	\$0.00	\$0.00
ECO4 TOTAL:	310,433				\$128.83	\$128.83	\$572.83
5	0			0	\$0.00	\$0.00	\$0.00
Shower Heads	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
9	0			0	\$0.00	\$0.00	\$0.00
Equipment	0			0	\$0.00	\$0.00	\$0.00
Related	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

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Systems Engineering and Management Corporation, Knoxville, TN

	FY94S EEAP F	T. KN	FY94S EEAP FT. KNOX WAER CONSERVATION STUDY	S NOI	TUDY		1 2
	CAL	CULAT	-CULATION WORK SHEET 1			DATE:	29 Oct 94
FACILITY NO. :	2778		FUNCTION:	·	Maintenance	9	
Occupancy:	40		Operating Hours:		8		
ECO Number	Existing Fixture System		Retrofited Fixture System	٤	Usage	Fixtures	Water Leaks
ECO Type	Description	LPM	Description	LPM	HRS/YR	Quantity	Eliminated LPY
1 avatory Sinke	Public Lavatory	9.5	Spring Loaded Faucets	4.7	730	5	
Lavatory Siliks							
ECO1 TOTAL:		LPM		LPM		5	0
2							0
Misc. Sinks							
ECO2 TOTAL:		LPF		LPF	#FL/YR	0	0
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	3000	9	
Water Closets			Repair Kit				
FCO3 TOTAL .		- 0		100	#E! ND	9	c
-CO3 - CO - C			76	ב ב	#1	٥	0
4 Urinals	Wall Mounted Flush Valve	5.68	Install 1.0 GPF Flush Valve Repair Kit	3.79	18250	က	
ECO4 TOTAL:		LPM		LPM	HRS/YR	က	0
5							0
Shower Heads							
FCOS TOTAL		Wd -		WQ -			c
					A	,	
T T T T T T T T T T T T T T T T T T T							
Equipment Deleted							
Related							
ECO6 TOTAL:				19.55 (A).57 (A).57 (A).57 (A).57 (A).57		0	0

Systems Engineering and Management Corporation, Knoxville, TN

	FY9	FY94S EEAP FT. KNOX W	P FT. K	W XON		ER CONSERVATION STUDY	2 OF 2
		73	ALCULAT	OM NOI			
FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ECO Number	Annual Water	Annua	Energy (Saving	WATER	Total	Total
ECO Type	Saving LPY	ELEC	ELEC	GAS	Dollar Saving	Dollar Saving	Dollars Invested
1	1,308,525			က	\$543.04	\$577.62	\$1,224.00
Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO1 TOTAL:	1,308,525	0	0	3	\$543.04	\$577.62	\$1,224.00
2	0			0	\$0.00	\$0.00	\$0.00
Misc. Sinks	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
3	68,400				\$28.39	\$28.39	\$360.29
Water Closets	0				\$0.00	\$0.00	\$0.00
	0				\$0.00	\$0.00	\$0.00
ECO3 TOTAL:	68,400				\$28.39	\$28.39	\$360.29
4	103,477				\$42.94	\$42.94	\$190.94
Urinals	0				\$0.00	\$0.00	\$0.00
	0				\$0.00	\$0.00	\$0.00
ECO4 TOTAL:	103,477				\$42.94	\$42.94	\$190.94
5	0			0	\$0.00	\$0.00	\$0.00
Shower Heads	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
9	0			0	\$0.00	\$0.00	\$0.00
Equipment	0			0	\$0.00	\$0.00	\$0.00
Related	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

SYSTEMS CORP PAGE 6-170

	FY94S EEAP FT. KNOX W	F. KNC	X W ER CONSERVATION STUDY	S NO	TUDY		102
	CALC	SULATI	$I \cap I$			DATE:	29 Oct 94
FACILITY NO. :	2943		FUNCTION:	'	Maintenance	e S	
Occupancy:	15		Operating Hours:	·	ω		
ECO Number	Existing Fixture System		Retrofited Fixture System	n	Usage	Fixtures	Water Leaks
ECO Type	Description	LPM	Description	LPM	HRS/YR	Quantity	Eliminated LPY
1 Lavatory Sinks	Public Lavatory	19	Spring Loaded Faucets	4.7	730	3	55780
T TOOL							
ECUI IOIAL:		LPM		LPM		3	55780
2 Misc. Sinks							0
ECO2 TOTAL:		LPF		LPF	#FL/YR	0	0
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	3000	3	
Water Closets			Repair Kit				
ECO3 TOTAL:		LPF		PF	#FI MR	۲,	O
V	Well Mounted Flush Valve	5.68	1 O CDE Elich	. 70	40000	, ,	>
Urinals	Vali Modified Figure Valve	00.00	Repair Kit	5.73	16250	-	
ECO4 TOTAL:	(1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	L P.M		LPM	HRS/YR	-	0
5							Ò
Shower Heads							
ECO5 TOTAL:		Md I		Md		c	C
6 Equipment							
Dolatica Total							
ECO6 TOTAL:						0	0
SYSTEMS CORP		Systen	Systems Engineering and Management Corporation,	nent C	orporation		Knoxville, TN

Systems Engineering and Management Corporation, Knoxville, TN

)	→ 1.						
		CALCULATION WO	ILCULAT	ION WO		SHEET 2	
FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		#WM/\$
2	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ECO Number	Annual Water	Annual	Energy 8	Saving	WATER	Total	Total
ECO Type	Saving LPY	ELEC KW	ELEC	GAS	Dollar Saving	Dollar Saving	Dollars Invested
_	2,089,195			5	\$867.02	\$922.23	\$734.40
Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
	. 0			0	\$0.00	\$0.00	\$0.00
ECO1 TOTAL:	2,089,195	0	0	5	\$867.02	\$922.23	\$734.40
2	0			0	\$0.00	\$0.00	\$0.00
Misc. Sinks	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
က	34,200				\$14.19	\$14.19	\$180.14
Water Closets	0				\$0.00	\$0.00	\$0.00
	0				\$0.00	\$0.00	\$0.00
ECO3 TOTAL:	34,200				\$14.19	\$14.19	\$180.14
4	34,493				\$14.31	\$14.31	\$63.65
Urinals	0				\$0.00	\$0.00	\$0.00
	0				\$0.00	\$0.00	\$0.00
ECO4 TOTAL:	34,493				\$14.31	\$14.31	\$63.65
5	0			0	\$0.00	\$0.00	\$0.00
Shower Heads	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
9	0			0	\$0.00	\$0.00	\$0.00
Equipment	0			0	\$0.00	\$0.00	\$0.00
Related	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

	FY94S EEAP FT. KNOX W	L KNOX	W R CONSERVATION STILLY	SNO	FLIDY		1 2
	CALC	SULATION				DATE:	29 Oct 94
FACILITY NO.:	2955		FUNCTION:		Maintenance	eg.	
Occupancy:	8		Operating Hours:		ω		
ECO Number ECO Type	Existing Fixture System Description	LPM	Retrofited Fixture System Description	m LPM	Usage HRS/YR	Fixtures Quantity	Water Leaks Eliminated LPY
1 I avatory Sinks							
ECO4 TOTAL		JAG 1				c	
2 2		**************************************		N L			D.
Misc. Sinks							
ECO2 TOTAL:		LPF		LPF	#FL/YR	0	0
3	Floor Mounted Flush Valve	17 Ins	Install 3.5 GPF Flush Valve	13.2	3000	2	
Water Closets			Repair Kit				
ECO3 TOTAL:		LPF		LPF	#FL/YR	2	0
4	Wall Mounted Flush Valve	5.68 In	Install 1.0 GPF Flush Valve	3.79	18250	7	
Urinals			Repair Kit				
ECO4 TOTAL:		LPM		LPM	HRS/YR	-	0
5							0
Shower Heads							
ECO5 TOTAL:		LPM		LPM		0	0
9							
Equipment							
Related							
						_	
ECO6 TOTAL:						0	0
SYSTEMS CORP	CORP	Systems	Systems Engineering and Management Corporation,	nent Co	orporation		Knoxville, TN

Systems Engineering and Management Corporation, Knoxville, TN

	FY9	FY94S EEAP		W XON	ER CONSER	FT. KNOX W ER CONSERVATION STUDY	2 OF 2
		CAI		IOM MOI	CULATION WORK SHEET 2		
FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
	Gas Rate:	10.51	#WW/\$		Demand Rate:		\$/KW
ECO Number	Annual Water	Annual	Annual Energy	Saving	WATER	Total	Total
ECO Type	Saving LPY	ELEC KW	ELEC KWH	GAS MWH	Dollar Saving	Dollar Saving	Dollars Invested
1	0			0	\$0.00	\$0.00	\$0.00
Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO1 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
2	0			0	\$0.00	\$0.00	\$0.00
Misc. Sinks	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
3	22,800				\$9.46	\$9.46	\$120.10
Water Closets	0				\$0.00	\$0.00	\$0.00
	0				\$0.00	\$0.00	\$0.00
ECO3 TOTAL:	22,800				\$9.46	\$9.46	\$120.10
4	34,493				\$14.31	\$14.31	\$63.65
Urinals	0				\$0.00	\$0.00	\$0.00
	0				\$0.00	\$0.00	\$0.00
ECO4 TOTAL:	34,493				\$14.31	\$14.31	\$63.65
5	0			0	\$0.00	\$0.00	\$0.00
Shower Heads	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
9	0			0	\$0.00	\$0.00	\$0.00
Equipment	0			0	\$0.00	\$0.00	\$0.00
Related	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

	FY94S EEAP FT. KNOX W	L KNC	X W/ ER CONSERVATION STUDY	IS NO	YQU.		102
	CALC	SULATI				DATE:	29 Oct 94
FACILITY NO. :	2958		FUNCTION:	Z	Maintenance	e)	
Occupancy:	30		Operating Hours:	I	ω		
ECO Number ECO Type	Existing Fixture System Description	LPM	Retrofited Fixture System Description	n PM	Usage HRS/YR	Fixtures Quantity	Water Leaks Eliminated LPY
1 Lavatory Sinks							
ECO1 TOTAL:		LPM		LPM		0	0
2 Misc. Sinks	Service Sink	15	Install Aerators	9.5	730	τ-	0
- IATO1 - IOT 9 I		ב ב		L	0/0		C
3 3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	3000	- 8	D.
Water Closets			Repair Kit				
ECO3 TOTAL:		LPF		LPF	#FL/YR	3	0
4	Wall Mounted Flush Valve	5.68	Install 1.0 GPF Flush Valve	3.79	18250	2	
Ormais			Repair Kit				
ECO4 TOTAL:		LPM		LPM	HRS/YR	2	0
Shower Heads							0
Silowei neaus							
ECO5 TOTAL:	And	LPM		LPM		0	0
Equipment							
Kelated							
ECO6 TOTAL:						0	0
O OMETICANO							
STOLEMS CORP		Systen	Systems Engineering and Management Corporation,	nent Co	rporation		Knoxville, TN

Systems Engineering and Management Corporation, Knoxville, TN

	FY9	FY94S EZAP		FT. KNOX W	ER CONSER	ER CONSERVATION STUDY	2 OF 2
		CAL	ALCULAT	ION WOI	CULATION WORK SHEET 2		
FACILITY NO.: 2958	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
1	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ECO Number	Annual Water	Annua	Annual Energy	Saving	WATER	Total	Total
ECO Type	Saving LPY	ELEC	ELEC KWH	GAS	Dollar Saving	Dollar Saving	Dollars Invested
1	0			0	\$0.00	\$0.00	\$0.00
Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO1 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
2	240,900			1	\$1.00	\$6.79	\$9.70
Misc. Sinks	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO2 TOTAL:	240,900	0	0	1	\$1.00	\$6.79	\$9.70
3	34,200				\$14.19	\$14.19	\$180.14
Water Closets	0				\$0.00	\$0.00	\$0.00
	0				\$0.00	\$0.00	\$0.00
ECO3 TOTAL:	34,200				\$14.19	\$14.19	\$180.14
4	68,985				\$28.63	\$28.63	\$127.30
Urinals	0				\$0.00	\$0.00	\$0.00
	0				\$0.00	\$0.00	\$0.00
ECO4 TOTAL:	68,985				\$28.63	\$28.63	\$127.30
5	0			0	\$0.00	\$0.00	\$0.00
Shower Heads	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
9	0			0	\$0.00	\$0.00	\$0.00
Equipment	0			0	\$0.00	\$0.00	\$0.00
Related	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
SYSTEMS CORP	ORP			Systems	Engineering and	Systems Engineering and Management Corporation,	ooration, Knoxville, TN

Systems Engineering and Management Corporation, Knoxville, TN

CALCULATION WORK SHEET 1 DATE: 31 Oct 94	Varies	Automated Flush Valve 5.68 Install 1.0 GPF Flush Valve 1.5PM Automated Flush Valve	Mail Mounted Flush Valve CALCULATION WORK SHEET 1 CALCULATION WORK SHEET 1 FUNCTION: Shack Bar	National Calculation Work Sheet 1 Shack Bar
Mail Mounted Flush Valve LPM Repair Kit LPM RPM RP	Pacility No. Agries Departing Hours Snack Bar	PACILITY NO. 1914 PUNCTION: Snack Bar	Pacility No. A014 Function Snack Bar	Nation N
Valies Operating Hours: 13 ber Description LPM Retrofited Fixture System Usage Fixtures e Description LPM Description LPM HRS/YR Quantity nks Public Lavatory 9.5 Spring Loaded Faucets 4.7 365 3 L: Public Lavatory 9.5 Spring Loaded Faucets 4.7 365 3 ks L: LPM Repair Kit LPM Filor Mounted Flush Valve 1.7 Install 3.5 GPF Flush Valve 3.79 1300 2 ets Repair Kit Repair Kit LPM Repair Kit 1.PM HRS/YR: 1 L: LPM Repair Kit LPM ILPM	Cocupancy: Varies Operating Hours: 13	Cocupancy: Valles Operating Hours: 13	Cocupancy: Valies Operating Hours: 13 ECO Number Existing Fixture System Retrofited Fixture System Usage Pixtures ECO Number Existing Fixture System Usage Pixtures ECO Type Description LPM Lavatory Sinks and Mixing Valve 4.7 ECOT TOTAL: LPM ECOT TOTAL: RECOZ TOTAL: LPF ECOZ TOTAL: LPF A Water Closets Repair Kit Lord A Wall Mounted Flush Valve 5.68 Inhals Repair Kit ECOA TOTAL: LPM ECOA TOTAL: LPM Linals Repair Kit Lord Mounted Flush Valve 5.68 Inhals Repair Kit ECOA TOTAL: LPM ECOA TOTAL: LPM ECOA TOTAL: LPM Equipment LPM Related Equipment Related ECOA TOTAL:	Varies Operating Hours: 13 per Existing Fixture System Retrofited Fixture System Usage Description Fixtures Inks Public Lavatory 9.5 Spring Loaded Faucets 4.7 365 3 L: And Mixing Valve LPM And Mixing Valve 3 3 ks Ling And Mixing Valve 1.2 1.00 2 Floor Mounted Flush Valve 1.7 Install 3.5 GPF Flush Valve 1.3 1.300 2 L: Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 1300 1 L: LPM Repair Kit Appair Kit
Existing Fixture System Retrofited Fixture System Usage Fixtures Description LPM Description LPM HRS/YR Quantity S.5 Spring Loaded Faucets 4.7 365 3 3 3 3 3 3 3 3 3	ECO Number	Nounted Flush Valve System Retrofited Fixture System Usage Fixtures	ECO Number Existing Fixture System Retrofited Fixture System Usage Description Extrures ECO Type Description LPM Description LPM HRSY'R Quantity Lavatory Sinks ECO1 TOTAL: LPM Spring Loaded Faucets 4.7 365 3 Misc. Sinks ECO2 TOTAL: LPF LPF LPF #FLYR 0 Water Closets Broom Mounted Flush Valve 1.PF #FLYR 2 4 Uninals Uninals LPM Repair Kit 1.PM HRSYR 1 ECO5 TOTAL: LPM Repair Kit 1.PM HRSYR 1 ECO4 TOTAL: LPM Repair Kit 1.PM HRSYR 1 ECO5 TOTAL: LPM Repair Kit 1.PM HRSYR 1 ECO5 TOTAL: LPM Repair Kit 1.PM HRSYR 1 ECO5 TOTAL: LPM LPM Related 1.PM 1.PM 1 ECO5 TOTAL: Broad Mistory Related 1.0 1	Existing Fixture System Description LPM Description LPM HRS/YR Quantity
Description LPM Description LPM HRS/YR Quantity	ECO Type Description LPM Description LPM HRS/YR Auantty Quantity 1 Public Lavatory Sinks ECO1 TOTAL: LPM 3 3 ECO1 TOTAL: LPM LPM 3 Misc. Sinks Misc. Sinks LPF LPF #FL/YR 0 A Water Closets LPF Repair Kit 2 1300 2 Water Closets LPF Repair Kit 2 12PF #FL/YR 0 ECO3 TOTAL: LPM Repair Kit 1 1 1 0 ECO4 TOTAL: LPM Repair Kit 1 0 1 0	ECO Type Description LPM Description LPM HRS/YR Quantity Qualve and Mixing Valve 4.7 365 3 Lavatory Sinks ECO1 TOTAL: LPM 3 3 Misc. Sinks Misc. Sinks LPF LPF #FL/YR 0 ECO2 TOTAL: A Wall Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 1300 2 ECO3 TOTAL: LPF Repair Kit LPF #FL/YR 0 ECO4 TOTAL: LPM Repair Kit 1 1 ECO5 TOTAL: LPM Repair Kit 1 1 Shower Heads ECO5 TOTAL: LPM Repair Kit 0 ECO5 TOTAL: LPM Related 0 0 ECO5 TOTAL: LPM LPM Resided 0 ECO5 TOTAL: LPM Related 0 0 ECO5 TOTAL: ECO5 TOTAL: 0 0 0 ECO5 TOTAL: ECO5 TOTAL: 0 0 0 ECO5 TOTAL: </td <td>ECO Type Description LPM Description LPM HRS/YR Quantity Alve and Mixing Loaded Faucets 4.7 365 3 Lavatory Sinks ECO1 TOTAL: LPM LPM LPM 3 Misc. Sinks ECO2 TOTAL: LPF LPF #FL/YR 0 ECO2 TOTAL: A Water Closets LPF Repair Kit 1 1 ECO3 TOTAL: LPF Repair Kit 1 1 1 ECO4 TOTAL: CO4 TOTAL: LPM Repair Kit 1 1 ECO5 TOTAL: LPM Repair Kit 1 0 1 ECO5 TOTAL: LPM Repair Kit 1 0 1 ECO5 TOTAL: LPM LPM Repair Kit 0 0 0 ECO5 TOTAL: LPM LPM RRS/YR 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0<td>Description LPM Description LPM HRSÝR Quantity Public Lavatory 9.5 Spring Loaded Faucets 4.7 365 3 s and Mixing Valve LPM 3 LPM LPM 3 Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 1300 2 s Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 1300 1 LPM Repair Kit LPM HRS/YR 1</td></td>	ECO Type Description LPM Description LPM HRS/YR Quantity Alve and Mixing Loaded Faucets 4.7 365 3 Lavatory Sinks ECO1 TOTAL: LPM LPM LPM 3 Misc. Sinks ECO2 TOTAL: LPF LPF #FL/YR 0 ECO2 TOTAL: A Water Closets LPF Repair Kit 1 1 ECO3 TOTAL: LPF Repair Kit 1 1 1 ECO4 TOTAL: CO4 TOTAL: LPM Repair Kit 1 1 ECO5 TOTAL: LPM Repair Kit 1 0 1 ECO5 TOTAL: LPM Repair Kit 1 0 1 ECO5 TOTAL: LPM LPM Repair Kit 0 0 0 ECO5 TOTAL: LPM LPM RRS/YR 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 <td>Description LPM Description LPM HRSÝR Quantity Public Lavatory 9.5 Spring Loaded Faucets 4.7 365 3 s and Mixing Valve LPM 3 LPM LPM 3 Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 1300 2 s Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 1300 1 LPM Repair Kit LPM HRS/YR 1</td>	Description LPM Description LPM HRSÝR Quantity Public Lavatory 9.5 Spring Loaded Faucets 4.7 365 3 s and Mixing Valve LPM 3 LPM LPM 3 Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 1300 2 s Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 1300 1 LPM Repair Kit LPM HRS/YR 1
Public Lavatory 9.5 Spring Loaded Faucets 4.7 365 3 and Mixing Valve LPM Same String Lavatory LPM Same String Lavatory LPM Same String Lavatory LPM LP	Lavatory Sinks	1	1	Public Lavatory 9.5 Spring Loaded Faucets 4.7 365 3 and Mixing Valve LPM 3
LPM	LPM	Lavatory Sinks	Lavatory Sinks	S
LPM LPM 3 3 3 3 3 3 3 3 3	ECO1 TOTAL: LPM	ECO1 TOTAL: LPM	Misc. Sinks	LPM S S
LPF	Misc. Sinks	Misc. Sinks	Misc. Sinks ECO2 TOTAL:	LPF
LPF	Misc. Sinks ECO2 TOTAL:	Misc. Sinks ECO2 TOTAL: LPF HELYPR: 0 2 300 2 300 2 300 2 300 2 300 3 3 3 3 3 3 3 3	Misc. Sinks LPF #FL/YR ECO2 TOTAL: 1 Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 1300 Water Closets Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 1300 Urinals ECO4 TOTAL: LPM Repair Kit ECO4 TOTAL: LPM LPM HRS/YR ECO5 TOTAL: LPM LPM LPM	Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 1300 2 Repair Kit Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 1300 1 Repair Kit LPM HRS/YR 1
Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 1300 2	ECO2 TOTAL:	ECO2 TOTAL: LPF LPF LPF #FLVR 0 Water Closets Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 1300 2 ECO3 TOTAL: LPF Repair Kit LPR #FLVR 2 ECO4 TOTAL: LPM Repair Kit LPM HRS/YR 1 ECO5 TOTAL: LPM LPM Repair Kit 0 0 ECU5 TOTAL: LPM LPM REquipment 0 0 0 EQUIPMENT EQUIPMENT ECU5 TOTAL: LPM Related 0 0 0 ECO5 TOTAL: Systems Engineering and Management Corporation. 0 0 0 0 0	ECO2 TOTAL: LPF #FL/YR 3 Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 1300 Water Closets LPF Repair Kit LPF #FL/YR ECO3 TOTAL: LPM Repair Kit LPR #FL/YR ECO4 TOTAL: LPM Repair Kit LPM HRS/YR Shower Heads ECO5 TOTAL: LPM HRS/YR Equipment Equipment LPM LPM HRS/YR Related Eduloment LPM LPM ECO5 TOTAL: LPM LPM	Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 1300 2
Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 1300 2	Short Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 1300 2	Style="backgrounded-liush Valve" 17 Install 3.5 GPF Flush Valve" 13.0 2	3 Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 1300 Water Closets LPF Repair Kit LPF #FL/YR EC03 TOTAL: LPM Repair Kit LPF #FL/YR EC04 TOTAL: LPM Repair Kit LPM HRS/YR Shower Heads EC05 TOTAL: LPM LPM HRS/YR Equipment Equipment LPM LPM Related EC06 TOTAL: LPM LPM	Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 1300 2
Comparing the	Water Closets Repair Kit LPF #FL/YR 2 ECO3 TOTAL: 4 Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 1300 1 ECO4 TOTAL: LPM Repair Kit 1 1 1 ECO5 TOTAL: 5 LPM 1 1 1 ECO5 TOTAL: 6 Equipment 0	Water Closets Repair Kit LPF #FL/YR 2 4 Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 1300 1 ECO4 TOTAL: LPM Repair Kit 1 1 5 Shower Heads Equipment 0 0 Equipment Related 0 0 ECO6 TOTAL: LPM 0 0 ECO6 TOTAL: Systems Engineering and Management Corporation. Knoxville. TN Noxville. TN	Water Closets Repair Kit LPF #FL/YR ECO3 TOTAL: 4 Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 1300 Urinals ECO4 TOTAL: LPM Repair Kit LPM HRS/YR 5 Shower Heads LPM LPM HRS/YR ECO5 TOTAL: EQ5 TOTAL: LPM LPM Equipment Related LPM LPM ECO6 TOTAL: ECO6 TOTAL: LPM LPM	Comparing the
LPF	CO3 TOTAL :	ECO3 TOTAL : LPF #FL/YR 2 4 Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 1300 1 ECO4 TOTAL : LPM Repair Kit LPM LPM 1 ECO5 TOTAL : 6 Equipment LPM 0 0 Equipment Related CC06 TOTAL : CC06 TOTAL : <td>ECO3 TOTAL: LPF #FL/YR: 4 Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 1300 Urinals LPM Repair Kit LPM HRS/YR ECO4 TOTAL: LPM HRS/YR LPM HRS/YR ECO5 TOTAL: LPM LPM HRS/YR Equipment C LPM LPM Related ECO6 TOTAL: LPM HRS/YR</td> <td>Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 1300 1 Repair Kit Repair Kit LPM HRS/YR 1 s LPM HRS/YR 1</td>	ECO3 TOTAL: LPF #FL/YR: 4 Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 1300 Urinals LPM Repair Kit LPM HRS/YR ECO4 TOTAL: LPM HRS/YR LPM HRS/YR ECO5 TOTAL: LPM LPM HRS/YR Equipment C LPM LPM Related ECO6 TOTAL: LPM HRS/YR	Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 1300 1 Repair Kit Repair Kit LPM HRS/YR 1 s LPM HRS/YR 1
Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 1300 1 Repair Kit LPM Repair Kit 1 1 S LPM HRS/YR 1 LPM LPM 0 0	Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 1300 1 Repair Kit	LPF	LPF #FL/YR #FL/	Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 1300 1 Repair Kit Image: Control of the properties of the proper
Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 1300 1 S LPM Repair Kit LPM HRS/YR 1 S LPM HRS/YR 1 1 S LPM C 0 0	Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 1300 1 Repair Kit LPM HRS/YR 1 LPM HRS/YR 1 LPM HRS/YR 1 LPM HRS/YR 1 LPM HRS/YR 1 LPM HRS/YR 1	Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 1300 1 Repair Kit LPM HRS/YR 1 LPM HRS/YR 1 LPM O O Systems Engineering and Management Corporation. Knoxville. TN	Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 1300 Image: Control of the property of the propert	Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 1300 1 Repair Kit LPM HRS/YR 1 S LPM HRS/YR 1
S	Urinals Repair Kit LPM HRS/YR 1 5 Shower Heads LPM 0 0 ECO5 TOTAL: 6 C 0 0 Equipment Related 0 0 0 ECO6 TOTAL: Avstems Fnringering and Management Congression (Knowillo TN) 0 0	Urinals Repair Kit Proposition Knoxville TN ECO4 TOTAL: LPM HRS/YR 1 5 Systems Engineering and Management Corporation 0 0	Urinals Repair Kit LPM HRS/YR 5 1	Repair Kit The state of the st
S	ECO4 TOTAL :	COO TOTAL	ECO4 TOTAL : LPM HRS/YR LPM HRS/YR LPM HRS/YR LPM LP	S S S S S S S S S S S S S S S S S S S
	Shower Heads ECO5 TOTAL: Equipment Related ECO6 TOTAL: COC TOTAL: Annual Management Corneration Known of Constraint and Cons	Shower Heads ECO5 TOTAL: Equipment Related ECO6 TOTAL: COC TOTAL: A postems Engineering and Management Corporation. Knoxville. TN	Shower Heads ECO5 TOTAL: Related ECO6 TOTAL:	
	Shower Heads ECO5 TOTAL: 6 Equipment Related Related ECO6 TOTAL: 6 ECO6 TOTAL: 7 Systems Engineering and Management Corneration Knowills TN	Shower Heads LPM 0 ECO5 TOTAL: LPM 0 Equipment Related 0 ECO6 TOTAL: Systems Engineering and Management Corporation. Knoxville. TN	Shower Heads ECO5 TOTAL: Equipment Related ECO6 TOTAL:	
	ECOS TOTAL: 6 Equipment Related ECOS TOTAL: 8 ECOS TOTAL: 9 Systems Engineering and Wanssement Cornoration Knowling TN	ECO5 TOTAL: LPM Control of the control	ECOS TOTAL: 6 Equipment Related ECOS TOTAL:	
	ECOS TOTAL: 6 Equipment Related ECOS TOTAL: CANSTEMS CORP	ECOS TOTAL: LPM 0 6 0 0 Equipment 0 0 ECOS TOTAL: Systems Engineering and Management Corporation. Knoxville. TN	ECOS TOTAL: Equipment Related ECOG TOTAL:	
11	Equipment	Equipment	Equipment Equipment Related	- The control of th
	ECO6 TOTAL: Systems Engineering and Management Corneration Knowills TN	Related Related ECO6 TOTAL: Systems Engineering and Management Corporation. Knoxville. TN	Equipment Related ECO6 TOTAL:	9
	Sveteme Engineering and Management Cornoration Knowdillo TN	Systems Engineering and Management Corporation. Knoxville. TN		uipment
	Svefems Engineering and Management Cornoration Knowills TN	Systems Engineering and Management Corporation. Knoxville. TN		elated
	Sveteme Engineering and Management Cornoration Knowills TN	Systems Engineering and Management Corporation. Knoxville. TN		
	Sveteme Engineering and Management Cornoration Knowillo TN	Systems Engineering and Management Corporation. Knoxville. TN		
	Sveteme Findingering and Management Cornoration	Systems Engineering and Management Corporation.		
	SYSTEMS CORP	SYSTEMS CORP Systems Engineering and Management Corporation.		
			SYSTEMS CORP Systems Engineering and Management Corporation,Knoxville, TN	

Systems Engineering and Management Corporation, Knoxville, TN

***********************************		FY9	FY94S EEA	FT. K	W XON	ER CONSER	VATION STUDY	2 OF 2	
Mater Rate: 0.42 \$/KL Energy Rate: \$/KV Gas Rate: 10.51 \$/MWH Demand Rate: \$/KW Annual Water Annual Energy Saving WATER Total \$/KW Saving LPY KW KWH MWH Dollar Saving \$/KW 392,558 0 0 1 \$162.91 \$172.34 0 0 0 \$0.00 \$0.00 9,880 0 0 \$0.00 \$0.00 2,457 \$1.02 \$1.02 \$1.02 2,457 0 0 \$0.00 \$0.00 0 0 \$0.00 \$0.00 \$0.00 0 0 \$0.00 \$0.00 \$0.00 2,457 \$1.02 \$1.02 \$0.00 0 0 \$0.00 \$0.00 \$0.00 0 0 \$0.00 \$0.00 \$0.00			CA	LCULAT	ION NOI	RK SHEET 2			1
Gas Rate: 10.51 \$/MWH Demand Rate: \$/MWH Demand Rate: \$/MWH \$/MWH Demand Rate: \$/MWH \$/MWH Demand Rate: \$/MWH \$/MWH Demand Rate: \$/MWH \$/MWH<	FACILITY NO. :	Water Rate:	0.42	\$/KL		Energy Rate:		УКМН	
Saving	†	Gas Rate:	10.51	\$/MWH		Demand Rate:		6/KW	
ks ELEC ELEC GAS Dollar Saving Dollar Saving Dollar Saving Dollar Saving Dollar Saving LEC Collar Saving LEC Collar Saving LEC Collar Saving LEC Collar Saving	ECO Number	Annual Water	Annual		Saving	WATER	Total	Total	T
ks 392,558 1 \$162.91 \$172.34 392,568 0 1 \$162.91 \$172.34 0 0 0 \$0.00 \$0.00 s 0 0 \$0.00 \$0.00 ts 9,880 \$4.10 \$4.10 \$4.10 2,457 \$1.02 \$1.02 \$1.02 ds 0 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00	ECO Type		ELEC	ELEC KWH	GAS	Dollar Saving	Dollar Saving	Dollars Invested	
ks 392,558 0 0 1 \$162.91 \$172.34 5 0 0 0 \$0.0	_	392,558			_	\$162.91	\$172.34	\$734.40	_
392,558 0 0 1 \$162.91 \$172.34 s 0 0 \$0.00 \$0.00 s 0 0 0 \$0.00 ts \$4.10 \$4.10 \$4.10 ts \$4.457 \$1.02 \$1.02 c \$4.457 \$1.02 \$1.02 ds 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00	Lavatory Sinks								
s 0 0 \$0.00 \$0.00 s 0 0 0 0 \$0.00 \$0.00 ts 0 0 0 0 \$0.00 \$0.00 ts 0 0 0 0 \$0.00 \$0.00 s 4.10 \$4.10 \$4.10 \$1.02 \$	ECO1 TOTAL:	392,558	0	0	-	\$162.91	\$172.34	\$734.40	Т
ts	2	0			0	\$0.00	\$0.00	\$0.00	
ts	Misc. Sinks								
ts 9,880 \$4.10 \$4.10 \$4.10 \$4.10 \$4.10 \$9,880 \$4.10 \$4	ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00	\top
ts 9,880 \$4.10 \$4.10 \$4.10 \$2,457 \$1.02 \$1	3	9,880				\$4.10	\$4.10	\$120.10	
9,880 \$4.10 \$4.10 2,457 \$1.02 \$1.02 2,457 \$1.02 \$1.02 ds 0 \$0.00 \$0.00 t 0 0 \$0.00 t 0 0 \$0.00 t 0 0 \$0.00 t 0 0 \$0.00	Water Closets								
2,457 \$1.02 \$1.02 2,457 \$1.02 0 \$0.00 ds 0 0 0 \$0.00 t t 0 0 0 \$0.00	ECO3 TOTAL:	9.880				\$4.10	\$4.10	\$120.10	T
2,457 \$1.02 \$1.02 0 \$0.00 \$0.00 ds 0 0 0 \$0.00 t 0 0 0 \$0.00 t 0 0 0 \$0.00	4	2,457				\$1.02	\$1.02	\$63.65	T
2,457 \$1.02 \$1.02 0 0 \$0.00 ds 0 0 \$0.00 t 0 0 \$0.00 t 0 0 \$0.00 t 0 0 \$0.00	Urinals								. :
ds	ECO4 TOTAL:	2,457				\$1.02	\$1.02	\$63.65	T
t	5	0			0	\$0.00	\$0.00	\$0.00	
t t 0 0 0 \$0.00	Shower Heads								i
t 0 0 0 \$0.00	ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00	Т
t 0 0 0 \$0.00	9								
00.0\$ 0 0 0 0	Equipment								
00.0\$ 0 0 0 0	Related								
00.0\$ 0 0 0 0									
	ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00	T

Systems Engineering and Management Corporation, Knoxville, TN

	FY94S EEAP FT	T. KN	F. KNOX WA R CONSERVATION STUDY	SNO	TUDY		1 2
	CALC	CULAT	CALCULATION WORK SHEET 1			DATE:	31 Oct 94
FACILITY NO.:	4250		FUNCTION:	'			
Occupancy:			Operating Hours:	·	ω		
ECO Number	Existing Fixture System		Retrofited Fixture System	Ε	Usage	Fixtures	Water Leaks
ECO Type	Description	LPM	Description	LPM	HRS/YR	Quantity	Eliminated LPY
1 Layatory Sinke	Public Lavatory	9.5	Spring Loaded Faucets	4.7	130	24	
Lavaioly Ollins							
ECO1 TOTAL:		LPM		LPM		24	0
2	Kitchen Sink	30	Install Aerators	9.5	130	3	
Misc. Sinks	Service Sink	30	Install Aerators	9.5	130	1	
ECO2 TOTAL:		LPF		LPF	#FL/YR	4	0
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	1300	26	
Water Closets			Repair Kit				
ECO3 TOTAL:		ᆸ		LPF	#FL/YR	26	0
4							
Urinals							
ECO4 TOTAL:		LPM		LPM	HRS/YR	0	0
5							
Shower Heads							
		J.					
ECO5 TOTAL:		LPM		LPM		0	0
9							
Equipment							
Related							
FCOE TOTAL .					i di	c	
LC00 101AL.							0
-							

Systems Engineering and Management Corporation, Knoxville, TN

	FY9	FY94S EEAP		M XON	ER CONSER	FT. KNOX W. ER CONSERVATION STUDY	2 OF 2
		CA	ALCULAT	OM NOI	LCULATION WORK SHEET 2		
FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
	Gas Rate:	10.51	#WW/\$		Demand Rate:		\$/KW
ECO Number	Annual Water	Annua		Saving	WATER	Total	Total
ECO Type	Saving LPY	ELEC	ELEC KWH	GAS	Dollar Saving	Dollar Saving	Dollars Invested
-	1,118,520			က	\$464.19	\$491.06	\$5,875.20
Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
ECO1 TOTAL:	1,118,520	0	0	3	\$464.19	\$491.06	\$5,875.20
2	479,700			_	\$1.99	\$2.11	\$29.09
Misc. Sinks	159,900			0	\$0.66	\$0.70	\$9.70
ECO2 TOTAL:	639,600	0	0	4	\$2.65	\$2.81	\$38.78
3	128,440				\$53.30	\$53.30	\$1,561.25
Water Closets				-			
ECO3 TOTAL:	128,440				\$53.30	\$53.30	\$1,561.25
4	0				\$0.00	\$0.00	\$0.00
Urinals							
ECO4 TOTAL:	0				\$0.00	\$0.00	\$0.00
5 Shower Heads	0			0	\$0.00	\$0.00	\$0.00
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
9 .							
Equipment			The state of the s				and the second s
Related							
ECO6 TOTAL:	0	С	c	c	00 0\$	\$0.00	\$0.00
		,)	,	20:00	00.00	00.00

Systems Engineering and Management Corporation, Knoxville, TN

	AW YOUN THE BAR THON	ZIVA	TAVIDE CONSERVAT		70117		2
	11 940 EEAT 1		WANTER CONSERVATION STUDY	0 2 2 2	IUDY		2
	CALC	ULATI	CULATION WORK SHEET 1			DATE:	31 Oct 94
FACILITY NO. :	4548		FUNCTION:	•	Lavatory Building	uilding	
Occupancy:			Operating Hours:	1	24		
ECO Number	Existing Fixture System		Retrofited Fixture System	n L	Usage	Fixtures	Water Leaks
ECO Type	Description	LPM	Description	LPM	HRS/YR	Quantity	Eliminated LPY
1	Public Lavatory	9.5	Spring Loaded Faucets	4.7	130	4	
Lavatory Sinks							
FCO1 TOTAL		Μd		Md		V	C
2				i		•	
Misc. Sinks							
ECO2 TOTAL:		LPF		LPF	#FL/YR	0	0
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	1300		
Water Closets			Repair Kit				
ECO3 TOTAL:		LPF		LPF	#FL/YR	2	0
4	Wall Mounted Flush Valve	5.68	Install 1.0 GPF Flush Valve	3.79	1300	2	
Urinals			Repair Kit				
ECO4 TOTAL:		LPM		LPM	HRS/YR	2	0
5						_	
Shower Heads							
ECO5 TOTAL:		LPM		LPM		0	0
9							
Equipment							
Related							
ECOE TOTAL				ž		c	•
ECOO LOIAL .					Section Section	0	O

Systems Engineering and Management Corporation, Knoxville, TN

	FY9	FY94S EEAP FT. KNOX W	P FT. KI	W XON	ER CONSER	ER CONSERVATION STUDY	2 OF 2
		Z)	ALCULAT	OW NOI	CALCULATION WORK SHEET 2		
FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		\$/КМН
	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ECO Number	Annual Water	Annua	Energy	Saving	WATER	Total	Total
ECO Type	Saving LPY	ELEC	ELEC KWH	GAS MWH	Dollar Saving	Dollar Saving	Dollars Invested
1	$\overline{2}$			0	\$77.36	\$81.84	\$979.20
Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
ECO1 TOTAL:	186,420	0	0	0	\$77.36	\$81.84	\$979.20
2	0			0	\$0.00	\$0.00	\$0.00
Misc. Sinks							
ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
3	24,700				\$10.25	\$10.25	\$300.24
Water Closets							
ECO3 TOTAL:	24,700				\$10.25	\$10.25	\$300.24
4	4,914				\$2.04	\$2.04	\$127.30
Urinals							
ECO4 TOTAL:	4,914				\$2.04	\$2.04	\$127.30
5	0			0	\$0.00	\$0.00	\$0.00
Shower Heads							
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
9							
Equipment							
Related							
ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

	FY94S EEAP F	T. KN	FY94S EEAP FT. KNOX WER CONSERVATION STUDY	S NO	TUDY		2
	CAL	CULAT	CALCULATION WORK SHEET 1			DATE:	29 Oct 94
FACILITY NO. :	4555		FUNCTION:	1	NCO Club		
Occupancy:	1 Meals / Day		Operating Hours:	•			
ECO Number	Existing Fixture System		Retrofited Fixture System	E	Usage	Fixtures	Water Leaks
ECO Type	Description	LPM	Description	LPM	HRS/YR	Quantity	Eliminated LPY
1	Dual Faucets	9.5	Spring Loaded Faucets	4.7	730	22	
Lavatory Sinks							
ECO1 TOTAL:		LPM	1、1、1、1、1、1、1、1、1、1、1、1、1、1、1、1、1、1、1、	LPM		22	0
2							
Misc. Sinks							
ECO2 TOTAL:		LPF		LPF	#FL/YR	0	0
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	3650	21	
Water Closets			Repair Kit				
FCO3 TOTAL		I PF		- PF	#FI MR	21	C
4	Wall Mounted Flush Valve	5.68	Install 1 0 GPE Flush Valve	3 79	3650	_	>
Urinals		8	1 1	5	8		
FCOA TOTAL .		MQ -	· · · · · · · · · · · · · · · · · · ·	20	HPS/VD		c
5		i					
Shower Heads							
FCOS TOTAL		Md		Ma		c	-
9	2 Comp. Sink (2 faucets)	17	Install Aerators	9.5	730	,	>
Equipment	1 Comp. Sink (1 faucets)	17	Install Aerators	9.5	730	. დ	
Related							
ECO6 TOTAL:						4	0

Systems Engineering and Management Corporation, Knoxville, TN

	FY9	FY94S EEAP FT. KNOX W	P FT. KI	W XON		ER CONSERVATION STUDY	2 OF 2
		73	LCULAT	OM NOI			
FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		\$/КМН
	Gas Rate:	10.51	\$/MWH		Demand Rate:		%/KW
ECO Number	Annual Water	Annual	Energy 8	Saving	WATER	Total	Total
ECO Type	Saving LPY	ELEC KW	ELEC KWH	GAS MWH	Dollar Saving	Dollar Saving	Dollars Invested
	5,757,510			6	\$2,389.37	\$2,482.73	\$4,488.00
Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO1 TOTAL:	5,757,510	0	0	6	\$2,389.37	\$2,482.73	\$4,488.00
2	0			0	\$0.00	\$0.00	\$0.00
Misc. Sinks	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
3	291,270				\$120.88	\$120.88	\$1,050.84
Water Closets	0				\$0.00	\$0.00	\$0.00
	0				\$0.00	\$0.00	\$0.00
ECO3 TOTAL:	291,270				\$120.88	\$120.88	\$1,050.84
4	48,290				\$20.04	\$20.04	\$371.28
Urinals	0				\$0.00	\$0.00	\$0.00
	0				\$0.00	\$0.00	\$0.00
ECO4 TOTAL:	48,290				\$20.04	\$20.04	\$371.28
5	0			0	\$0.00	\$0.00	\$0.00
Shower Heads	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
9	328,500			-	\$1.36	\$6.69	\$8.08
Equipment	985,500			2	\$4.09	\$20.07	\$24.24
Related	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO6 TOTAL:	1,314,000	0	0	2	\$5.45	\$26.76	\$32.32

Systems Engineering and Management Corporation, Knoxville, TN

	FY94S EEAP FT	KN	FY94S EEAP FT. KNOX WA R CONSERVATION STUDY	S NO	TUDY		1 2	_
	CALC	ULAT	CULATION WORK SHEET 1			DATE:	31 Oct 94	
FACILITY NO. :	4769		FUNCTION:	- ,	Chapel			
Occupancy:			Operating Hours:	r		,		
ECO Number	Existing Fixture System		Retrofited Fixture System	E	Usage	Fixtures	Water Leaks	_
ECO Type	Description	LPM	Description	LPM	HRS/YR	Quantity	Eliminated LPY	
_	Public Lavatory	9.5	Spring Loaded Faucets	4.7	130	4		_
Lavatory Sinks								
ECO1 TOTAL:		LPM		ГРМ		4	С	
2								
Misc. Sinks								,
								_
ECO2 TOTAL:		LPF		LPF	#FL/YR	0	0	_
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	1300	5		_
Water Closets			Repair Kit					
ECO3 TOTAL:		LPF		LPF	#FL/YR	2	0	_
4								_
Urinals								
ECO4 TOTAL:		LPM		LPM	HRS/YR	0	0	_
5								_
Shower Heads								_
ECO5 TOTAL:		LPM		LPM		0	0	
9								_
Equipment					:			_
Related								,
FCO6 TOTAL .						c		
1000 1010								_

Systems Engineering and Management Corporation, Knoxville, TN

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	FY94S EEAP FT.	. KNC	KNOX WA R CONSERVATION STUDY	S NOI	TUDY		1 2
	CALC	ULAT	CALCULATION WORK SHEET 1			DATE:	31 Oct 94
FACILITY NO. :	5217		FUNCTION:	• •	Training Building	uilding	
Occupancy:	9		Operating Hours:	•	8		
ECO Number	e System		Retrofited Fixture System	E -		Fixtures	Water Leaks
ECO lype		ור היי	Description	LPM	٤١	Quantity	Eliminated LPY
1 Lavatory Sinks	Public Lavatory	5.7	Spring Loaded Faucets	4./	130	4	
ECO1 TOTAL:		LPM		LPM		4	0
2							
Misc. Sinks							
ECO2 TOTAL:	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	LPF		LPF	#FL/YR	0	0
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	1300	4	
Water Closets			Repair Kit				
ECO3 TOTAL .		<u>п</u>		1 DE	#FI WR	V	c
E003 1017 :	1			100		• 0	
4 Urinals	Vvaii Mounted Flush Vaive	2.68	Install 1.0 GPF Flush Valve Repair Kit	3.79	4400	7	
FCO4 TOTAL		Md	等。 (2) (3) (4) (5) (6) (7) (7) (8) (9) (Md -	HRS/YR	2	С
5							
Shower Heads							
· LATOUR	1000年の日本の日本の日本の日本の日本の日本の日本の日本の日本の日本の日本の日本の日本の	200		1			
ECUS IOIAL.				I I			
D D							
Related							
FCO6 TOTAL:						0	0

Systems Engineering and Management Corporation, Knoxville, TN

	FY9	4S EEA	P FT. K	N XON	FY94S EEAP FT. KNOX WATER CONSERVATION STUDY	VATION STUDY	2 OF 2
		73	LCULAT	ION WO	CALCULATION WORK SHEET 2		
FACILITY NO. :	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
7.70	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ECO Number	Annual Water	Annual	Energy :	Saving	WATER	Total	Total
ECO Type	Saving LPY	ELEC KW	ELEC KWH	GAS MWH	Dollar Saving	Dollar Saving	Dollars Invested
1	9			0	\$28.16	\$29.79	\$979.20
Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
ECO1 TOTAL:	67,860	0	0	0	\$28.16	\$29.79	\$979.20
2	0			0	\$0.00	\$0.00	\$0.00
Misc. Sinks							
ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
က	19,760				\$8.20	\$8.20	\$240.19
Water Closets							
ECO3 TOTAL:	19,760				\$8.20	\$8.20	\$240.19
4	16,632				\$6.90	\$6.90	\$127.30
Urinals							
ECO4 TOTAL:	16,632				\$6.90	\$6.90	\$127.30
2	0			0	\$0.00	\$0.00	\$0.00
Shower Heads							
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
9							
Equipment							
Related							
ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

	FY94S EEAP F	T. KN	FY94S EEAP FT. KNOX WER CONSERVATION STUDY	ON S	, Adn		- 2
	CAL	CULAT	LCULATION WORK SHEET 1			DATE:	29 Oct 94
FACILITY NO. :	5220		FUNCTION:	2	Maintenance	<u> </u>	
Occupancy:			Operating Hours:	ı	8		
ECO Number ECO Type	Existing Fixture System Description	LPM	Retrofited Fixture System Description	L PM	Usage HRS/YR	Fixtures Quantity	Water Leaks Eliminated LPY
1 Lavatory Sinks	Public Lavatory	26.5	Spring Loaded Faucets	26.5	730	3	
ECO1 TOTAL:		LPM		LPM		3	0
2 Misc. Sinks							
ECO2 TOTAL: 3 Water Closets	Floor Mounted Flush Valve	17 17	Install 3.5 GPF Flush Valve Repair Kit	LPF 13.2	#FL/YR 3000	2	0
ECO3 TOTAL : 4 Urinals	Wall Mounted Flush Valve	LPF 5.68	Install 1.0 GPF Flush Valve Repair Kit	LPF 3.79	#FL/YR 18250	3 2	0
ECO4 TOTAL : 5 Shower Heads		LPM		LPM	HRS/YR	3	0
ECO5 TOTAL: 6 Equipment Related		L PM		LPM		0	0
ECO6 TOTAL:						0	0
SYSTEMS CORP	CORP	Syster	Systems Engineering and Management Corporation,	nent Co	rporation		Knoxville, TN

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	ΕVO	AS FEA	D ET K	M X CN	TED CONSED	FY94S FEAD ET KNOY W TED CONSEDVATION STILLY	0 10 0
		CA	LCULAT	ION WOI	CALCULATION WORK SHEET 2	TO NOTE OF	2 70 2
FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ECO Number	Annual Water	Annual	Energy 8	Saving	WATER	Total	Total
ECO Type	Saving LPY	ELEC KW	ELEC	GAS	Dollar Saving	Dollar Saving	Dollars Invested
-	870,525			2	\$361.27	\$384.27	\$734.40
Lavatory Sinks	0	and agent a		0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO1 TOTAL:	870,525	0	0	2	\$361.27	\$384.27	\$734.40
2	0			0	\$0.00	\$0.00	\$0.00
Misc. Sinks	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
က	27,000				\$23.66	\$23.66	\$300.24
Water Closets	0				\$0.00	\$0.00	\$0.00
	0				\$0.00	\$0.00	\$0.00
ECO3 TOTAL:	57,000				\$23.66	\$23.66	\$300.24
4	103,477				\$42.94	\$42.94	\$190.94
Urinals	0				\$0.00	\$0.00	\$0.00
	0				\$0.00	\$0.00	\$0.00
ECO4 TOTAL:	103,477				\$42.94	\$42.94	\$190.94
2	0			0	\$0.00	\$0.00	\$0.00
Shower Heads	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
9	0			0	\$0.00	\$0.00	\$0.00
Equipment	0			0	\$0.00	\$0.00	\$0.00
Related	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO6 TOTAL:	0	0		0	\$0.00	\$0.00	\$0.00

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FACILITY NO. 5223 FUNCTION Fire Department		FY94S EEAP FT.	KNO	FY94S EEAP FT. KNOX WA ER CONSERVATION STUDY	S NOI	TUDY		1 2
Existing Fixture System Retrofited Fixture System LPM Rescription LPM HRS/TR Quantity		CALCI	JLATIC	ON WORK SHEET 1			DATE:	31 Oct 94
Existing Fixture System Retrofited Fixture System Description LPM Description LPM HRS/YR Quantity	FACILITY NO. :	5223		FUNCTION:	·	Fire Depar	tment	
Existing Fixture System Retrofited Fixture System Usage Fixtures	Occupancy:	9		Operating Hours:	'	24		
Public Lavatory 17 Spring Loaded Faucets LPM 130 3 3 3 3 3 3 3 3 3	ECO Number		Ma	Retrofited Fixture System	m I	Usage	Fixtures	Water Leaks
LPM	1 1		-	Spring Loaded Faucets	4.7	130	3	Ellilliated Lr I
LPM	Lavatory Sinks			D				
Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 3285 2	ECO1 TOTAL:		M		LPM	教師を表示して		0
Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 3285 2	2							
Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 3285 2	Misc. Sinks							
Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 3285 2	ECO2 TOTAL.		Щ	THE STATE OF THE S	30	#EI VD		
Control Marker Cont	3	Т	1		12.0	328E		
LPF #FL/YR 2	Water Closets		-	1 1	13.2	3203	7	
Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 6570 1 S Repair Kit LPM RRSYR\$ 1 S LPM RRSYR\$ 1 S LPM RRSYR\$ 1 S RRSYR\$ 1 RRSYR\$ C RRSYR\$ 1 RRSYR\$ <								
Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 6570 1 S LPM Repair Kit LPM HRS/YR\$ 1 S LPM HRS/YR\$ 1 1 S C C C C S C C C C S C C C C C C C C C C C C C C C C C C C C C C	ECO3 TOTAL:	14	_PF		LPF	#FL/YR	2	0
S S S S S S S S S S S S S S S S S S S	4		_		3.79	6570	1	
S	Urinals			Repair Kit				
S								
	ECO4 TOTAL:		PM M		LPM	HRS/YR		0
	2							
	Shower Heads							
	FCO5 TOTAL		Μď	The state of the s	MO			c
	9					e		
	Equipment					verify the darker or morrow bearing to the many property of		
	Related							
	FCOE TOTAL		Ŷ		V 444		•	c
	ECUP IOIAL:							

Systems Engineering and Management Corporation, Knoxville, TN

	FΥ9	FY94S EEAP		XOX X	FER CONSER	FT. KNOX WE TER CONSERVATION STUDY	2 OF 2
		/S		TION WO	CALCULATION WORK SHEET 2		
FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
2770	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ECO Number	Annual Water	Annua	Annual Energy Saving	Saving	WATER	Total	Total
ECO Type	Saving LPY	ELEC KW	ELEC KWH	GAS MWH	Dollar Saving	Dollar Saving	Dollars Invested
-	315,315			-	\$130.86	\$138.43	\$734.40
Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
ECO1 TOTAL:	315,315	0	0	4	\$130.86	\$138.43	\$734.40
2	0			0	\$0.00	\$0.00	\$0.00
Misc. Sinks						. The state of the	
ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
3	24,966				\$10.36	\$10.36	\$120.10
Water Closets							
ECO3 TOTAL:	24,966				\$10.36	\$10.36	\$120.10
4	12,417				\$5.15	\$5.15	\$63.65
Urinals							
ECO4 TOTAL:	12,417				\$5.15	\$5.15	\$63.65
5	0			0	\$0.00	\$0.00	\$0.00
Shower Heads							
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
9							
Equipment							
Related							
		C					
ECO6 TOTAL:	0	0	٥	٥	\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

	EY94S FFAP FT KNOX W	KN	X W. ER CONSERVATION STUDY	ON S	LUDY		1-2
	CAL	CULAT	lö			DATE:	29 Oct 94
FACILITY NO. :	5252		FUNCTION:		Maintenance	9	
Occupancy:	10		Operating Hours:	i	8		
ECO Number	Existing Fixture System Description	LPM	Retrofited Fixture System Description	n LPM	Usage HRS/YR	Fixtures Quantity	Water Leaks Eliminated LPY
1 Lavatory Sinks	Public Lavatory	9.5	Spring Loaded Faucets	4.7	730	-	
ECO1 TOTAL:		LPM		LPM		-	0
2 Misc. Sinks							
ECO2 TOTAL:		LPF		LPF	#FL/YR	0	0
3 Water Closets	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve Repair Kit	13.2	3000	-	
ECO3 TOTAL .		LPF		LPF	#FL/YR	-	0
4	Wall Mounted Flush Valve	5.68	Install 1.0 GPF Flush Valve	3.79	18250	7	
Urinals			Repair Kit				
ECO4 TOTAL:		LPM		LPM	HRS/YR	-	0
5 Shower Heads							
ECO5 TOTAL:		LPM		LPM		0	0
6 Equipment Related							
	2 cont.					c	C
ECO6 TOTAL:							
SYSTEMS CORP	SORP	Syste	Systems Engineering and Management Corporation,	ment C	orporatio		Knoxville, TN

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	6 / 4	4S FFA	PFTK	X X CZ	FR CONSER	FY94S FFAP FT KNOX W FR CONSFRVATION STILLY	2 OE 2
		CA	ALCULAT	IOM NOI	LCULATION WORK SHEET 2		1
FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ECO Number	Annual Water	Annual		Saving	WATER	Total	Total
ECO Type	Saving LPY	ELEC KW	ELEC	GAS MWH	Dollar Saving	Dollar Saving	Dollars Invested
-	261,705			-	\$108.61	\$115.52	\$244.80
Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO1 TOTAL:	261,705	0	0	1	\$108.61	\$115.52	\$244.80
2	0			0	\$0.00	\$0.00	\$0.00
Misc. Sinks	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
ဗ	11,400				\$4.73	\$4.73	\$60.05
Water Closets	0				\$0.00	\$0.00	\$0.00
	0				\$0.00	\$0.00	\$0.00
ECO3 TOTAL:	11,400				\$4.73	\$4.73	\$60.05
4	34,493				\$14.31	\$14.31	\$63.65
Urinals	0				\$0.00	\$0.00	\$0.00
	0				\$0.00	\$0.00	\$0.00
ECO4 TOTAL:	34,493				\$14.31	\$14.31	\$63.65
2	0			0	\$0.00	\$0.00	\$0.00
Shower Heads	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
9	0			0	\$0.00	\$0.00	\$0.00
Equipment	0			0	\$0.00	\$0.00	\$0.00
Related	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

	EV9AS EEAD ET KNOX W	r KNIC	Y W EB CONSERVATION STILLY	O NO	TIIDV		4.5
					100-	DATE.	70 00
	5						23 001 34
FACILITY NO. :	5253		FUNCTION:	'	Maintenance	eg S	
Occupancy:	10		Operating Hours:	·	8		
ECO Number	Existing Fixture System		Retrofited Fixture System	E	Usage	Fixtures	Water Leaks
ECO Type		LPM	Description	LPM	HRS/YR	Quantity	Eliminated LPY
	Public Lavatory	26.5	Spring Loaded Faucets	4.7	730	-	
Lavatory Sinks	Public Lavatory	=	Spring Loaded Faucets	4.7	730	က	
ECO1 TOTAL:		LPM		LPM		4	0
2							
Misc. Sinks							
				1			
ECOZ IOIAL:				- F	#\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	0	0
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	3000	4	
Water Closets			Repair Kit				
ECO3 TOTAL:		LPF		LPF	#FL/YR	4	0
4	Wall Mounted Flush Valve	2.68	Install 1.0 GPF Flush Valve	3.79	18250	3	
Urinals			Repair Kit				
ECO4 TOTAL:		LPM		LPM	HRS/YR	3	0
2							
Shower Heads							
ECOS TOTAL:		LPM		LPM		0	0
9							
Equipment							
Related							
ECO6 TOTAL:						0	0
OVOTENS	000			'	,		
STSTEINS CORP	זאטי	Syster	Systems Engineering and Management Corporation,	ment C	orporatio		Knoxville, TN

Systems Engineering and Management Corporation, Knoxville, TN

	FΥ9	FY94S EEA	P FT. KNOX W	MOX W	ER CONSER	TER CONSERVATION STUDY	2 OF 2
		C,	LCULAT	ION WO	CALCULATION WORK SHEET 2		
FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ECO Number	Annual Water	Annual		Saving	WATER	Total	Total
ECO Type	Saving LPY	ELEC	ELEC KWH	GAS MWH	Dollar Saving	Dollar Saving	Dollars Invested
	1,006,305			လ	\$417.62	\$444.21	\$244.80
Lavatory Sinks	982,215			2	\$407.62	\$431.22	\$734.40
	0			0	\$0.00	\$0.00	\$0.00
ECO1 TOTAL:	1,988,520	0	0	5	\$825.24	\$875.43	\$979.20
2	0			0	\$0.00	\$0.00	\$0.00
Misc. Sinks	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
3	45,600				\$18.92	\$18.92	\$240.19
Water Closets	0				\$0.00	\$0.00	\$0.00
	0				\$0.00	\$0.00	\$0.00
ECO3 TOTAL:	45,600				\$18.92	\$18.92	\$240.19
4	103,477				\$42.94	\$42.94	\$190.94
Urinals	0				\$0.00	\$0.00	\$0.00
	0				\$0.00	\$0.00	\$0.00
ECO4 TOTAL:	103,477				\$42.94	\$42.94	\$190.94
2	0			0	\$0.00	\$0.00	\$0.00
Shower Heads	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
9	0			0	\$0.00	\$0.00	\$0.00
Equipment	0			0	\$0.00	\$0.00	\$0.00
Related	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

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	FY94S EEAP FT. KNOX W	r. KNO	X W ER CONSERVATION STUDY	S NOI	TUDY		1 2
	CALC	ULATION	ᄓᅐᅵ			DATE:	29 Oct 94
FACILITY NO. :	5256		FUNCTION:	1	Maintenance	9	
Occupancy:	10		Operating Hours:	'	ω		
ECO Number	Existing Fixture System		Retrofited Fixture System		Usage	Fixtures	Water Leaks
ECO Type	Description Dublic Levetory	L PM	Spring Loaded Equate	LPM	HRS/YR	Quantity	Eliminated LPY
Lavatory Sinks	I WILL LAYARUTY	-	סטווווט בסמממת ו מתכפנט	ř	5	7	71,030
ECO1 TOTAL:		LPM		LPM			27890
Mico Sinko	Service Sink	1-1	Install Aerators	9.5	730	2	
WISC. SINKS							
ECO2 TOTAL:		LPF		LPF	#FL/YR	2	0
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	3000	3	
Water Closets			Repair Kit				
ECO3 TOTAL:		LPF	*************************************	LPF	#FL/YR	3	0
4	Wall Mounted Flush Valve	5.68	Install 1.0 GPF Flush Valve	3.79	18250	2	
Urinals			Repair Kit				
ECO4 TOTAL:		LPM		LPM	HRS/YR	2	0
5							
Shower Heads							
ECOE TOTAL .		- DIM		MG		c	
		E -					
Equipment							
Related							
ECO6 TOTAL:				16. 12. 13. 13.		C	C
SYSTEMS CORP		System	Systems Engineering and Management Corporation,	nent C	orporation	1	Knoxville, TN
		•))		•		•

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FACILITY NO.: 5256 ECO Number 1 Lavatory Sinks 2 Misc. Sinks	FY94S Water Rate: Gas Rate: Annual Water A Saving LPY E 682,700 0 0 0 0 0 131,400 0 131,400		CALCULATION WO	NOX W ION WOI GAS MWH 0 0 0 0 0 0 0	SAP FT. KNOX W ER CONSER	TUDY sing	\$/KW/ \$/KW/ Total Dollars Invested \$489.60 \$0.00 \$0.00 \$19.39 \$19.39 \$6.00 \$0.00 \$0.00 \$0.00 \$0.00
ECUZ IUIAL: 3 Water Closets	131,400 34,200 0 0	-	D		\$1.55 \$14.19 \$0.00 \$0.00	\$3.70 \$14.19 \$0.00 \$0.00	\$19.39 \$180.14 \$0.00 \$0.00
ECO3 TOTAL: 4 Urinals	34,200 68,985 0				\$14.19 \$28.63 \$0.00	\$14.19 \$28.63 \$0.00	\$127.30 \$0.00
ECO4 TOTAL: 5 Shower Heads	0 0 0 0			0 0	\$0.00 \$0.00 \$0.00 \$0.00	\$0.00 \$28.63 \$0.00 \$0.00 \$0.00	\$0.00 \$127.30 \$0.00 \$0.00 \$0.00

Systems Engineering and Management Corporation, Knoxville, TN

\$0.00 \$0.00 \$0.00 \$0.00 \$0.00

\$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00

\$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00

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Equipment

Related

ECO5 TOTAL:

\$0.00

SYSTEMS CORP

ECO6 TOTAL:

							1 2
	CAL	CULAT	CALCULATION WORK SHEET 1			DATE:	31 Oct 94
FACILITY NO. :	5916		FUNCTION:	1	Enlisted Barracks	arracks	
Occupancy:	100		Operating Hours:	'	15		
ECO Number FCO Type	Existing Fixture System Description	E Md	Retrofited Fixture System Description	m P	Usage HRS/YR	Fixtures Organtity	Water Leaks
1	Public Lavatory	9.5	Spring Loaded Faucets	4 7	730	31	
Lavatory Sinks							
ECO1 TOTAL:		LPM		LPM		31	0
2							
Misc. Sinks							
ECO2 TOTAL:		LPF		LPF	#FL/YR	0	0
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	3000	36	
Water Closets			Repair Kit				
FCO3 TOTAL .		– PF		100	#EI ND	36	c
4	Wall Mounted Flush Valve	5 68	Install 1 0 GPF Flush Valve	3 79	2000	22	
Urinals			1 1	5		77	
ECO4 TOTAL:		LPM		l PM	HRS/YR	22	0
5				i			
Shower Heads							
ECO5 TOTAL:		LPM		LPM		0	0
9							
Equipment Related							
ECO6 TOTAL:		\$ \$ \$				0	0

Systems Engineering and Management Corporation, Knoxville, TN

	FY9	4S EEA	P FT. KP	W XON	ER CONSER	FY94S EEAP FT. KNOX W. ER CONSERVATION STUDY	2 OF 2
		73	ALCULAT	OM NOI	CALCULATION WORK SHEET 2		
FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
2	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ECO Number	Annual Water	Annual	Energy	Saving	WATER	Total	Total
ECO Type	Saving LPY	ELEC KW	ELEC	GAS	Dollar Saving	Dollar Saving	Dollars Invested
-	l 🕳			19	\$3,366.83	\$3,561.74	\$7,588.80
Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
ECO1 TOTAL:	8,112,855	0	0	19	\$3,366.83	\$3,561.74	\$7,588.80
2	0			0	\$0.00	\$0.00	\$0.00
Misc. Sinks							
ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
က	410,400				\$170.32	\$170.32	\$2,161.73
Water Closets							
ECO3 TOTAL:	410,400				\$170.32	\$170.32	\$2,161.73
4	291,060				\$120.79	\$120.79	\$1,400.26
Urinals							
ECO4 TOTAL:	291,060				\$120.79	\$120.79	\$1,400.26
2	0			0	\$0.00	\$0.00	\$0.00
Shower Heads							
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
9							
Equipment							en e
Related							
ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

	EV94S EEAD ET	KNIC.	EY94S FEAD ET KNOX WA	NO NO	אטווזי		7
	CALC	ULAT	CALCULATION WORK SHEET 1		200	DATE:	29 Oct 94
FACILITY NO. :	5917		FUNCTION:		Enl. Pers./Dining	Dining	
Occupancy:	3 Meals / Day		Operating Hours:	,	24		
ECO Number	Existing Fixture System		Retrofited Fixture System	n	Usage	Fixtures	Water Leaks
ECO Type	Description	LPM	Description	LPM	HRS/YR	Quantity	Eliminated LPY
_	Dual Faucets	9.5	Spring Loaded Faucets	4.7	730	3	
Lavatory Sinks							
ECO1 TOTAL:		LPM M		LPM		3	0
2							
Misc. Sinks							
ECO2 TOTAL:		LPF		LPF	#FL/YR	0	0
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	10950	2	
Water Closets			Repair Kit				
ECO3 TOTAL .		nd -		- DE	#E! ND	2	c
	1	- 0			\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	,	
4 Urinals	Wall Mounted Flush Valve	5.68	Install 1.0 GPP Flush Valve Repair Kit	3.79	10950	-	
ECO4 TOTAL:		LPM		LPM	HRS/YR	~	0
5							0
Shower Heads							
ECO5 TOTAL:		LPM		LPM		0	0
9	3 Comp. Sink (2 faucets)	17	Install Aerators	9.5	1460	-	
Equipment	2 Comp. Sink (2 faucets)	17	Install Aerators	9.5	1460	2	
Related							
ECO6 TOTAL:		747 747 747 747				8	0

Systems Engineering and Management Corporation, Knoxville, TN

	FY9	FY94S EEAP		FT. KNOX WA	HER CONSER	PER CONSERVATION STUDY	2 OF 2
		Ö	ALCULAT	IOM NOI	CALCULATION WORK SHEET 2		
FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
- - - -	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ECO Number	Annual Water	Annua	Energy 8	Saving	WATER	Total	Total
ECO Type	Saving LPY	ELEC	HMX ELEC	GAS	Dollar Saving	Dollar Saving	Dollars Invested
	785,115			1	\$325.82	\$338.55	\$612.00
Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO1 TOTAL:	785,115	0	0	1	\$325.82	\$338.55	\$612.00
2	0			0	\$0.00	\$0.00	\$0.00
Misc. Sinks	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
3	83,220				\$34.54	\$34.54	\$100.08
Water Closets	0				\$0.00	\$0.00	\$0.00
	0				\$0.00	\$0.00	\$0.00
ECO3 TOTAL:	83,220				\$34.54	\$34.54	\$100.08
4	20,696				\$8.59	\$8.59	\$53.04
Urinals	0				\$0.00	\$0.00	\$0.00
	0				\$0.00	\$0.00	\$0.00
ECO4 TOTAL:	20,696				\$8.59	\$8.59	\$53.04
5	0			0	\$0.00	\$0.00	\$0.00
Shower Heads	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
9	000'259			101	\$272.66	\$1,338.05	\$8.08
Equipment	1,314,000			203	\$545.31	\$2,676.11	\$16.16
Related	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO6 TOTAL:	1,971,000	0	0	304	\$817.97	\$4,014.16	\$24.24

Systems Engineering and Management Corporation, Knoxville, TN

	FY94S EEAP FT	KN	F. KNOX WATER CONSERVATION STUDY	SNO	TUDY		162
	CALC	ULATI	CALCULATION WORK SHEET 1			DATE:	31 Oct 94
FACILITY NO. :	5918		FUNCTION:	•	Chapel		
Occupancy:			Operating Hours:	·	The second of th		
ECO Number	Existing Fixture System		Retrofited Fixture System	ш	Usage	Fixtures	Water Leaks
ECO Type		LPM	Description	LPM	HRS/YR	Quantity	Eliminated LPY
_	Public Lavatory	9.5	Spring Loaded Faucets	4.7	130	3	
Lavatory Sinks							
ECO1 TOTAL:		LPM		LPM		3	0
2							
Misc. Sinks							
ECO2 TOTAL:		LPF		LPF	#FL/YR	0	0
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	1300	3	
Water Closets			Repair Kit				
ECO3 TOTAL:		LPF		LPF	E#FL/YR	3	0
4	Wall Mounted Flush Valve	5.68	Install 1.0 GPF Flush Valve	3.79	1300	2	
Urinals			Repair Kit				
ECO4 TOTAL:		L PM		I PM	I PM HRS/YR	2	0
5							
Shower Heads							
ECO5 TOTAL:		LPM		FbM	非恐怖的特别 的	0	0
9							
Equipment							
Related							
ECO6 TOTAL:						0	0

Systems Engineering and Management Corporation, Knoxville, TN

	FYS	FY94S EEA		W XON	ER CONSER	P FT. KNOX WATER CONSERVATION STUDY	2 OF 2
		Ď	ALCULAT	IOM NOI	CALCULATION WORK SHEET 2		
FACILITY NO.: 5918	Water Rate:	0.42	\$/KL		Energy Rate:	<i>\$</i>	#WX/\$
	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ECO Number	Annual Water	Annua		Saving	WATER	Total	Total
ECO Type	Saving LPY	ELEC KW	ELEC	GAS	Dollar Saving	Dollar Saving	Dollars Invested
_	139,815			0	\$58.02	\$61.38	\$734.40
Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
ECO1 TOTAL:	139,815	0	0	0	\$58.02	\$61.38	\$734.40
2	0			0	\$0.00	\$0.00	\$0.00
Misc. Sinks							
ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
3	14,820				\$6.15	\$6.15	\$180.14
Water Closets							
ECO3 TOTAL:	14,820				\$6.15	\$6.15	\$180.14
4	4,914				\$2.04	\$2.04	\$127.30
Urinals							
ECO4 TOTAL:	4,914				\$2.04	\$2.04	\$127.30
5	0			0	\$0.00	\$0.00	\$0.00
Shower Heads							
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
9							
Equipment							
Related							
ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

	FY94S EEAP FI. KNOX WA	. Y	OX WALLE CONSERVATION STUDY	S NOI	TUDY		1 000
	CALC	CULAT	CALCULATION WORK SHEET 1			DATE:	31 Oct 94
FACILITY NO. :	5920		FUNCTION:		Enlisted Barracks	arracks	
Occupancy:	100		Operating Hours:		15		
ECO Number	Existing Fixture System		Retrofited Fixture System	ш	Usage	Fixtures	Water Leaks
ECO Type	Description	LPM	Description	LPM	HRS/YR	Quantity	Eliminated LPY
	Public Lavatory	9.5	Spring Loaded Faucets	4.7	730	34	
Lavatory Sinks							
ECO4 TOTAL		2					•
ECOI IOIAL.		Z		E L		34	0
Mice Cinke							
WIESC. OHINS					-		
ECO2 TOTAL:		LPF	1000年代の東京の東京の大学の大学の大学の大学の大学の大学の大学の大学の大学の大学の大学の大学の大学の	Hd.	#FL/YR	0	0
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	3000	36	
Water Closets							
ECO3 TOTAL:		LPF		LPF	#FL/YR	36	0
4	Wall Mounted Flush Valve	5.68	Install 1.0 GPF Flush Valve	3.79	0002	22	
Urinals			Repair Kit		-		
. IATOT ACOT							
ECO4 101AL:		7 2		L L	HKS/YK	77	0
Shower Heads							
ECO5 TOTAL:		LPM	から、	LPM		0	0
9							
Equipment							
Related							
ECO6 TOTAL:						0	0

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Systems Engineering and Management Corporation, Knoxville, TN

	FYS	FY94S EEAP		FT. KNOX W		ER CONSERVATION STUDY	2 OF 2
		7 3	ALCULAT	IOM NOI	CALCULATION WORK SHEET 2		
FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
)	Gas Rate:	10.51	#WW/\$		Demand Rate:		\$/KW
ECO Number	Annual Water	Annual	Energy	Saving	WATER	Total	Total
ECO Type	Saving LPY	ELEC KW		GAS MWH	Dollar Saving	Dollar Saving	Dollars Invested
-	8,897,970			20	\$3,692.66	\$3.906.42	\$8.323.20
Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
ECO1 TOTAL:	8,897,970	0	0	20	\$3,692.66	\$3.906.42	\$8.323.20
2	0			0	\$0.00	\$0.00	80.00
Misc. Sinks							
ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
3	410,400				\$170.32	\$170.32	\$2,161,73
Water Closets							
ECO3 TOTAL:	410,400				\$170.32	\$170.32	\$2.161.73
4	291,060				\$120.79	\$120.79	\$1,400.26
Urinals							
ECO4 TOTAL:	291,060				\$120.79	\$120.79	\$1.400.26
2	0			0	\$0.00	\$0.00	\$0.00
Shower Heads							
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
9							
Equipment							
Related							
- 1							
ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

		- 1					
	FY94S EEAP FT	٠.	KNOX WATER CONSERVATION STUDY	SNO	TUDY		1 6 2
	CALC	ULATI	CALCULATION WORK SHEET 1			DATE:	31 Oct 94
FACILITY NO. :	5925		FUNCTION:	- 1	Admin/Supply	Aldi	
Occupancy:	18		Operating Hours:	'	10		
ECO Number	Existing Fixture System		Retrofited Fixture System	ш	Usage	Fixtures	Water Leaks
ECO Type	Description	LPM	Description	LPM	HRS/YR	Quantity	Eliminated LPY
1	Public Lavatory	9.5	Spring Loaded Faucets	4.7	130	9	
Lavatory Sinks							
ECO1 TOTAL:		LPM		LPM	STATE OF THE STATE	9	0
2							
Misc. Sinks							
ECO2 TOTAL:		LPF		LPF	#FL/YR	0	0
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	2200	2	
Water Closets			Repair Kit				
		L C	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				
ECO3 IOIAL:		뷥		7	#FLYK	5	0
4	Wall Mounted Flush Valve	5.68	Install 1.0 GPF Flush Valve	3.79	8700	က	
Urinals			Repair Kit				
	- 1						
ECO4 TOTAL:		E PM	19日本を開発して、19日本の日本の日本の日本の日本の日本の日本の日本の日本の日本の日本の日本の日本の日	LPM	HRS/YR	8	0
5							
Shower Heads							
ECOS TOTAL .		20		DM	記 風地 あるいかい	c	
		E	A STATE OF THE STA		1. 1. 1. 1. 1. 1.		
Farrinment							
Related							
ECO6 TOTAL:				日本網點		0	0

Systems Engineering and Management Corporation, Knoxville, TN

FACILITY NO. Water Rate: 0.42 \$/KL Energy Rate: \$/KWH 5925 Gas Rate: 10.51 \$/MWH Energy Rate: \$/KWH ECO Number Annual Water Annual Energy Saving WATER Total Total ECO Type Saving LPY KW KWH MWH Dollar Saving Dollar Saving Dollar Saving Dollar Saving Dollars Invested Lavatory Sinks 279,630 0 0 \$0.00 \$0.00 \$1,680 \$1,600 \$1,600 ECOT TOTAL: 0 0 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 Misc. Sinks 0 0 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 Water Closets 41,800 0 0 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 ECOA TOTAL: 49,329 \$20.47 \$20.47 \$20.07 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	Water Rate: 0.42 \$/KL Gas Rate: 10.51 \$/MWH Annual Water Annual Energy \$/MWH Z79,630 0 0 S 0 0 279,630 0 0 S 0 0 41,800 0 0 41,800 0 0 49,329 0 0 S 0 0 O 0 0 S 0 0 O 0 0 CORPP 0 0	Water Rate: 0.42 \$/KL Gas Rate: 10.51 \$/MWH Annual Water Annual Energy & ELEC ELEC ELEC ELEC ELEC ELEC ELEC EL	Water Rate: 0.42 \$/KL Gas Rate: 10.51 \$/MWH Annual Water Annual Energy & KW ELEC ELEC ELEC ELEC ELEC ELEC ELEC ELEC	> 0							
Gas Rate: 10.51 \$MWWH Demand Rate: \$KW \$KW Annual Energy Saving RWATER Total Total Bollar Saving Saving RWATER Total Bollar Saving Savi	Annual Water Annual Energy Saving Annual Energy Saving ELEC ELEC GAS Saving LPY KW KWH MWH Dollar Saving \$122.76 \$122.	Gas Rate: 10.51 \$/MWH Annual Water Annual Energy & Annual Energy & ELEC Saving LPY KW KWH 279,630 ELEC ELEC ELEC ELEC ELEC ELEC ELEC ELEC	Gas Rate: 10.51 \$/MWH Annual Water Annual Energy ELEC ELEC		ater Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
Saving	ual Water Annual Energy ual Water Annual Energy ng LPY KW KWH 79,630 0 0 0 0 0 0 0 1,800 0 0 0 9,329 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ual Water Annual Energy ual Water Annual Energy ng LPY KW KWH 79,630 0 0 0 0 0 0 0 1,800 0 0 0 9,329 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ual Water Annual Energy & Annual Energy & ELEC ng LPY KW KWH 79,630 0 0 0 0 0 0 0 1,800 0 0 0 9,329 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		is Rate:	1	\$/MWH		Demand Rate:		\$/KW
ks ELEC ELEC GAS Dollar Saving Dollar Saving Dollar Saving Dollar Saving Dollar Saving Dollar Saving S122.76 ks 0 0 0 450.00 \$0.00 \$0.00 c 279,630 0 0 0 \$0.00 \$0.00 c 0 0 0 \$0.00 \$0.00 \$0.00 c 41,800 0 0 \$17.35 \$17.35 \$17.35 ts 41,800 0 0 \$17.35 \$17.35 \$17.35 ds 49,329 0 0 \$20.07 \$0.00 \$0.00 ds 0 0 \$0.00 \$0.00 \$0.00 \$0.00 ds 0 0 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	1,800 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1,800 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1,800 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	· · · · · ·	nnual Water	Annual		aving	WATER	Total	Total
ks 279,630 1 \$116.05 \$122.76 ks 0 \$0.00 \$0.00 \$0.00 s \$0 0 \$0.00 \$0.00 s \$0.00 \$0.00 \$0.00 \$0.00 ts 41,800 \$17.35 \$17.35 \$17.35 ts 441,800 \$20.47 \$20.47 ds 0 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 t \$0.00	9,630 0 0 0 0 0 0,329 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	79,630 0 0 0 0 0 0,329 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	9,530 0 0 0 0 0 0 0 0 0 0 0 0 0	_		ELEC KW	i e	GAS	Dollar Saving	Dollar Saving	Dollars invested
ks 0 0 50.00 \$0.00	0 0 0 0 0 1,800 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 1,800 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 1,800 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		279,630			-	\$116.05	\$122.76	\$1,468.80
279,630 0 1 \$116.05 \$122.76 5 0 0 0 \$0.00 \$0.00 41,800 0 0 \$17.35 \$17.35 49,329 \$20.47 \$20.47 \$20.47 49,329 \$0.00 \$0.00 \$0.00 40 0 0 \$0.00 40 0 \$0.00 \$0.00 40 \$0.00 \$0.00 \$0.00	9,329 0 0 1,800 9,329 0 0 0 0 0 0 0 0 0 0 0 0 0	9,329 0 0 1,800 9,329 0 0 0 0 0 0 0 0 0 0 0 0 0	1,800 0 0,329 0 0 0 0 0 0 0 0 0 0 0 0 0	Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
\$ 0 0 0 \$0.0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ECO1 TOTAL:	279,630	0	0	-	\$116.05	\$122.76	\$1.468.80
\$ 0 0 0 \$ 0.00 \$	0 0 0 0 1,800 9,329 0 0 0 0 0 0 0	0 0 0 0 1,800 9,329 0 0 0 0	0 0 0 0 1,800 9,329 0 0 0 0 0 0 0	2	0			0	\$0.00	\$0.00	\$0.00
ts 41,800 0 0 0 \$10.00 \$17.35	0 0 0 0 1,800 9,329 0 0 0 0 0 0 0	0 0 0 0 1,800 9,329 0 0 0 0 0 0 0	0 0 0 0 1,800 9,329 0 0 0 0 0 0 0	Misc. Sinks							
ts 41,800 \$17.35 \$17.35 \$17.35 ts 41,800	1,800 1,800 9,329 0 0 0 0 0 0 0	1,800 1,800 9,329 0 0 0 0 0 0 0	1,800 1,800 9,329 0 0 0 0 0 0 0	ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
ts 41,800 \$17.35 \$17.35 \$17.35 \$17.35 \$17.35 \$17.35 \$20.47 \$20.47 \$20.47 \$20.47 \$20.47 \$20.47 \$20.47 \$20.47 \$20.47 \$20.47 \$20.47 \$20.47 \$20.47 \$20.00 \$0.00	1,800 9,329 0 0 0 0 0 0 0	1,800 9,329 0 0 0 0 0 0 0 0 0 0 0 0	1,800 9,329 0 0 0 0 0 0 0	3	41,800				\$17.35	\$17.35	\$300.24
41,800 \$17.35 \$17.35 49,329 \$20.47 \$20.47 49,329 0 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 t 0 0 \$0.00 t 0 0 \$0.00 t 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00	1,800 9,329 0 0 0 0 0 0 0	1,800 9,329 0 0 0 0 0 0	1,800 9,329 0 0 0 0 0 0 0	Water Closets							
49,329 \$20.47 \$20.47 \$20.47 \$20.47 \$20.47 \$20.47 \$20.47 \$20.47 \$20.47 \$20.47 \$20.47 \$20.00	9,329 0 0 0 0 0 0 0	9,329 0 0 0 0 0 0 0 0	9,329 0 0 0 0 0 0 0	ECO3 TOTAL:	41,800				\$17.35	\$17.35	\$300.24
49,329 \$20.47 \$20.47 \$0.00 ds	9,329 0 0 0 0 0 0 0	9,329 0 0 0 0 0	9,329 0 0 0 0 0 0	4	49,329				\$20.47	\$20.47	\$190.94
49,329 \$20.47 \$20.47 ds 0 \$0.00 \$0.00 ds 0 0 \$0.00 t 0 0 \$0.00 t 0 0 \$0.00 t 0 0 \$0.00	9,329 0 0 0 0 0 0 0	9,329 0 0 0 0 0 0 0	9,329 0 0 0 0 0 0 0	Urinals							
ds	0 0 0	0 0 0	0 0 0	ECO4 TOTAL:	49,329				\$20.47	\$20.47	\$190.94
ds	0 0 0	0 0 0	0 0 0	2	0			0	\$0.00	\$0.00	\$0.00
t	0 0 0 0	0 0 0	0 0 0	Snower Heads							
1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0	0 0 0	0 0 0	ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
0 0 0 \$0.00	0 0 0	0 0	0 0 0	9							
00.00\$ \$0.00	0 0 0	0 0 0	0 0 0	Equipment							And make a make a control of the property of t
00.00\$ \$0.00	0 0 0	0 0	0 0 0	Related							
0 0 0 0 0 0 0 0 0 0	0 0 0	0 0	0 0								
				ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
							•	Systems	Engineering สาเ	ม Management cor	poration, knoxville,

Systems Engineering and Management Corporation, Knoxville, TN

FY94S EEAP FT. KNOX WANK SHEET 1 DATE: 31 Oct 94								
Separation North Street		FY94S EEAP FT.	KNOX WA	MR CONSERVAT	S NOI	TUDY		
Second		CALCU	LATION WO	RK SHEET 1			DATE:	31 Oct 94
Existing Fixture System Retrofited Fixture System Description LPM Description LPM HRS/YR Quantity	FACILITY NO. :	5926		FUNCTION:		Admin. Fa	Ö	
Existing Fixture System	Occupancy:	28		Operating Hours:	'	12		
Description LPM Description LPM HRS/YR Quantity	ECO Number			rofited Fixture Syster	E	Usage	Fixtures	Water Leaks
Public Lavatory 17 Spring Loaded Faucets 4.7 130 15	ECO Type		РМ	Description	LPM	HRS/YR	Quantity	Eliminated LPY
LPM	-			ig Loaded Faucets	4.7	130	15	
LPM	Lavatory Sinks							
Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 2200 5 Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 2200 5 Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 4368 5 Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 4368 5 Repair Kit LPM HRS/YR; 5 LPM HRS/YR; 5	ECO1 TOTAL:		PM		LPM	大学 の かんしょう	15	0
Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 2200 5 Samuel Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 4.368 5 Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 4.368 5 Samuel Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 4.368 5 Samuel Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 4.368 5 Samuel Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 4.368 5 Samuel Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 4.368 5 Samuel Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 4.368 5 Samuel Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 4.368 5 Samuel Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 4.368 5 Samuel Mounted Flush Valve 6.68 Install 1.0 GPF Flush Valve 3.79 4.368 5 Samuel Mounted Flush Valve 6.68 Install 1.0 GPF Flush Valve 3.79 4.368 5 Samuel Mounted Flush Valve 6.68 Install 1.0 GPF Flush Valve 6.68 10 GPF Flush Valve	2							
LPF	Misc. Sinks							
Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 2200 5								
Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 2200 5	ECO2 TOTAL:		PF	The Company of the Co	LPF	#FL/YR		0
Nail Mounted Flush Valve 1.0 GPF Flush Valve 3.79 4368 5 5 5 5 5 5 5 5 5	3		Install		13.2	2200	2	
Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 4368 5 Repair Kit LPM HRS/YR 5 LPM HRS/YR 5 LPM LPM Repair Kit 6	Water Closets			Repair Kit				
Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 4368 5 S Repair Kit LPM HRS/YR 5 LPM LPM LPM 0	ECO3 TOTAL .		DE	さい 紅い できることを含む 軽視的 れいの をめた マーラ	10	#EI (VD)		c
Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 4368 5	1010							
Color	4 Urinals		Install	1.0 GPF Flush Valve Repair Kit	3.79	4368	2	
Company								
t t	ECO4 TOTAL:	医静物溶入	PM	1	LPM	HRS/YR		0
Company Comp	5							
: The state of the	Shower Heads							
	1							
	ECOS IOIAL:				LPM	では、対象に対象には、		0
	9							
	Equipment							
	Related							
	FCOR TOTAL .		## A 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		\$35 \$75 \$75 \$75 \$75	7		c
	LCC0 101AL.			1977年の日本の日本の日本の日本の日本の日本の日本の日本の日本の日本の日本の日本の日本の		4		>

Systems Engineering and Management Corporation, Knoxville, TN

	FY9	FY94S EEAP	_	W XON	ER CONSER	FT. KNOX WA ER CONSERVATION STUDY	2 OF 2
		CAI		OM NOI	-CULATION WORK SHEET 2		
FACILITY NO. :	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ECO Number	Annual Water	Annua	Energy 8	Saving	WATER	Total	Total
ECO Type	Saving LPY	ELEC KW	ELEC KWH	GAS MWH	Dollar Saving	Dollar Saving	Dollars Invested
	1,576,575			4	\$654.28	\$692.15	\$3,672.00
Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
ECO1 TOTAL:	1,576,575	0	0	4	\$654.28	\$692.15	\$3,672.00
2	0			0	\$0.00	\$0.00	\$0.00
Misc. Sinks							
ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
3	41,800				\$17.35	\$17.35	\$300.24
Water Closets							
ECO3 TOTAL:	41,800				\$17.35	\$17.35	\$300.24
4	41,278				\$17.13	\$17.13	\$318.24
Urinals							
ECO4 TOTAL:	41,278				\$17.13	\$17.13	\$318.24
5	0			0	\$0.00	\$0.00	\$0.00
Shower Heads							
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
9							
Equipment							
Related					•		
ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

	THE CAP ELAB ET	TINN	VALOV MATERIAN STILLY	ONC	YOUT		100
	CAL	CULAT	CALCULATION WORK SHEET 1			DATE:	ば
FACILITY NO. :	5927		FUNCTION:		Gym		
Occupancy:	Varies		Operating Hours:	'	Varies		
ECO Number	Existing Fixture System		Retrofited Fixture System	n	Usage	Fixtures	Water Leaks
ECO Type			Description	LPM	HRS/YR	Quantity	Eliminated LPY
-	Public Lavatory	9.5	Spring Loaded Faucets	4.7	365	12	
Lavatory Sinks							
ECO1 TOTAL:		LPM		LPM		12	0
2							
Misc. Sinks							
ECO2 TOTAL:		LPF		LPF	#FL/YR	0	0
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	2200	10	
Water Closets			Repair Kit				
ECO3 TOTAL:		LPF		LPF	#FL/YR	10	0
4	Wall Mounted Flush Valve	5.68	Install 1.0 GPF Flush Valve	3.79	2200	4	
Urinals			Repair Kit				

ECO4 TOTAL:		LPM		LPM	HRS/YR	4	0
2				·			
Shower Heads							
ECO5 TOTAL:		LPM		LPM		0	0
9							
Equipment							
Related							
					-		
ECO6 TOTAL:				\$		0	0

Systems Engineering and Management Corporation, Knoxville, TN

	FY9	FY94S FFA	P FT KN	W XON	R CONSER	P FT KNOX WA R CONSERVATION STILDY	2 OF 2	
		Ö	LCULAT	ION WO	CALCULATION WORK SHEET 2			_
FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH	
1766	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW	
ECO Number	Annual Water	Annual	Energy 5	Saving	WATER	Total	Total	7
ECO Type	Saving LPY	ELEC	ELEC	GAS	Dollar Saving	Dollar Saving	Dollars Invested	
-	1,570,230			4	\$651.65	\$689.37	\$2,937.60	_
Lavatory Sinks								1
ECO1 TOTAL:	1,570,230	0	0	4	\$651.65	\$689.37	\$2,937.60	_
2	0			0	\$0.00	\$0.00	\$0.00	T
Misc. Sinks								1 1
ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00	
3	83,600				\$34.69	\$34.69	\$600.48	T
Water Closets								i i
								Ţ
ECO3 TOTAL:	83,600				\$34.69	\$34.69	\$600.48	7
4	16,632				\$6.90	\$6.90	\$254.59	ī
Urinals								-
ECO4 TOTAL:	16,632				\$6.90	\$6.90	\$254.59	
2	0			0	\$0.00	\$0.00	\$0.00	
Shower Heads								
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00	1
9								
Equipment								1
Related								
ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00	T
								ſ

Systems Engineering and Management Corporation, Knoxville, TN

	FY94S EEAP FT	T. KN	. KNOX WATER CONSERVATION STUDY	S NOI	TUDY		162
	CAL	SULAT	CALCULATION WORK SHEET 1			DATE:	31 Oct 94
FACILITY NO. :	5928		FUNCTION:	• 1	Theater		
Occupancy:	Varies		Operating Hours:	4,	4 movies/wk	۷.	
ECO Number	Existing Fixture System		Retrofited Fixture System	ш	Usage	Fixtures	Water Leaks
ECO Type	Description	LPM	Description	LPM	HRS/YR	Quantity	Eliminated LPY
	Public Lavatory	9.5	Spring Loaded Faucets	4.7	130	9	
Lavatory Sinks			and Mixing Valve				
ECO1 TOTAL:		LPM		I PM		g	C
2							
Misc. Sinks							
ECO2 TOTAL:		LPF		LPF	#FL/YR	0	0
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	1300	2	
Water Closets			Repair Kit				
		1					
ECO3 TOTAL:		LPF		10.	#FL/YR	5	0
4	Wall Mounted Flush Valve	5.68	install 1.0 GPF Flush Valve	3.79	1300	2	
Urinals			Repair Kit				
ECO4 TOTAL:		LPM		LPM	LPM HRS/YR	2	0
5							
Shower Heads							
		1					
ECOS TOTAL:		LPM		LPM		0	0
9							
Equipment							:
Related							
TATOL COOL		7				(
ECO6 IOIAL:						0	0

Systems Engineering and Management Corporation, Knoxville, TN

	FY9	FY94S EEA		MOX W	MER CONSER	P FT. KNOX WAMER CONSERVATION STUDY	2 OF 2
		Ö	ALCULAT	TION WO	CALCULATION WORK SHEET 2		
FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ECO Number	Annual Water	Annual	Energy	Saving	WATER	Total	Total
ECO Type	Saving LPY	ELEC	ELEC	GAS	Dollar Saving	Dollar Saving	Dollars Invested
_	279,630			-	\$116.05	\$122.76	\$1,468.80
Lavatory Sinks							
ECO1 TOTAL:	279,630	0	0	_	\$116.05	\$122.76	\$1,468.80
2	0			0	\$0.00	\$0.00	\$0.00
Misc. Sinks							
ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
က	24,700				\$10.25	\$10.25	\$300.24
Water Closets							
ECO3 TOTAL:	24,700				\$10.25	\$10.25	\$300.24
4	4,914				\$2.04	\$2.04	\$127.30
Urinals							
ECO4 TOTAL:	4,914				\$2.04	\$2.04	\$127.30
5	0			0	\$0.00	\$0.00	\$0.00
Shower Heads							
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
9	-	_					
Equipment							
Related							
ECO6 TOTAL:	0	0	0	0	80.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

	EVGAS EEAD ET KNOY MA	TKNIC		TONO	25		7
	7 1 343 EEAT F	2	A WAKER CONSERVATION STODI	ONO	2		7
	CAL	CULATI	CALCULATION WORK SHEET 1			DATE:	29 Oct 94
FACILITY NO. :	6117		FUNCTION:	Ž	Maintenance	æ	
Occupancy:	801		Operating Hours:		8		
ECO Number	Existing Fixture System	MO	Retrofited Fixture System		Usage	Fixtures	Water Leaks
1 Lavatory Sinks				4		Z Callinety	Cillilliated LT
ECO1 TOTAL:		LPM		LPM		0	0
2 Misc. Sinks							0
ECO2 TOTAL:		LPF		LPF #	#FL/YR	0	0
3 Water Closets	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve Repair Kit	13.2	3000	2	
ECO3 TOTAL:		Hal		7.	#FL/YR	2	0
4 Urinals	Wall Mounted Flush Valve	5.68	Install 1.0 GPF Flush Valve Repair Kit	3.79	18250	-	
ECO4 TOTAL:		LPM		LPM	HRS/YR	-	0
5 Shower Heads							0
ECO5 TOTAL:		LPM		LPM		0	0
6 Equipment							
Related							
ECO6 TOTAL:						0	0
SYSTEMS CORP	ORP	System	Systems Engineering and Management Corporation.	nent Cor	poration	i i	Knoxville. TN

Systems Engineering and Management Corporation, Knoxville, TN

2 OF 2	
CONSERVATION STUDY	
T. KNOX WA ER CO	
FY94S EEAP FT	

		73	I CULAT	OW NO	CALCULATION WORK SHEET 2		
FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ECO Number	Annual Water	Annual	Energy 9	Saving	WATER	Total	Total
ECO Type	Saving	ELEC KW	ELEC	GAS	Dollar Saving	Dollar Saving	Dollars Invested
1	ı			0	\$0.00	\$0.00	\$0.00
Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO1 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
2	0			0	\$0.00	\$0.00	\$0.00
Misc. Sinks	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
က	22,800				\$9.46	\$9.46	\$120.10
Water Closets	0				\$0.00	\$0.00	\$0.00
	0				\$0.00	\$0.00	\$0.00
ECO3 TOTAL:	22,800				\$9.46	\$9.46	\$120.10
4	34,493				\$14.31	\$14.31	\$63.65
Urinals	0				\$0.00	\$0.00	\$0.00
	0				\$0.00	\$0.00	\$0.00
ECO4 TOTAL:	34,493				\$14.31	\$14.31	\$63.65
5	0			0	\$0.00	\$0.00	00'0\$
Shower Heads	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
9	0			0	\$0.00	\$0.00	00.0\$
Equipment	0			0	\$0.00	\$0.00	00.0\$
Related	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

	FY94S EEAP F	T. KN	FY94S EEAP FT. KNOX WALER CONSERVATION STUDY	S NO	TUDY		102
	CAL	CULAT	CALCULATION WORK SHEET 1			DATE:	29 Oct 94
FACILITY NO. :	6147		FUNCTION:		Maintenance	e)	
Occupancy:	10		Operating Hours:	·	8		
ECO Number	Existing Fixture System		Retrofited Fixture System	ш	Usage	Fixtures	Water Leaks
ECO Type	Description	LPM	Description	LPM	HRS/YR	Quantity	Eliminated LPY
1 Lavatory Sinks							
ECO1 TOTAL:		LPM		LPM		0	0
2							
Misc. Sinks							
ECO2 TOTAL:		I PF		1 DE	#FI MR	c	c
3	Floor Mounted Flush Valve	17	Install 3 5 GDE Elish Valve	120	2000	00	>
Water Closets		-	_ ! !	13.2	0000	7	
ECO3 TOTAL:		LPF		LPF	#FL/YR	2	0
4	Wall Mounted Flush Valve	5.68	Install 1.0 GPF Flush Valve	3.79	18250	1	
Urinals			Repair Kit				
- TATOT 4					- 1.		
ECO4 101AL:		L		L M	HKS/YK	-	0
5 Shower Heads							0
FOOR TOTAL .		MO		MO		C	
בממין בי							
O O							
Polatod							
ויפומופת							
ECO6 TOTAL:						0	0

Systems Engineering and Management Corporation, Knoxville, TN

	FY9	4S EEA	P FT. KI	W XON	ER CONSER	FY94S EEAP FT. KNOX WA ER CONSERVATION STUDY	2 OF 2
		Ö	LCULAT	OM NOI	CALCULATION WORK SHEET 2		
FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
	Gas Rate:	10.51	#WW/\$		Demand Rate:		\$/KW
ECO Number	Annual Water	Annual		Saving	WATER	Total	Total
ECO Type	Saving LPY	ELEC	ELEC KWH	GAS MWH	Dollar Saving	Dollar Saving	Dollars Invested
_	0			0	\$0.00	\$0.00	\$0.00
Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO1 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
2	0			0	\$0.00	\$0.00	\$0.00
Misc. Sinks	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
3	22,800				\$9.46	\$9.46	\$120.10
Water Closets	0				\$0.00	\$0.00	\$0.00
	0				\$0.00	\$0.00	\$0.00
ECO3 TOTAL:	22,800				\$9.46	\$9.46	\$120.10
4	34,493				\$14.31	\$14.31	\$63.65
Urinals	0				\$0.00	\$0.00	\$0.00
	0				\$0.00	\$0.00	\$0.00
ECO4 TOTAL:	34,493				\$14.31	\$14.31	\$63.65
2	0			0	\$0.00	\$0.00	\$0.00
Shower Heads	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
9	0			0	\$0.00	\$0.00	\$0.00
Equipment	0			0	\$0.00	\$0.00	\$0.00
Related	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

FY945 EEAP FT, KNOX WATER CONSERVATION STUDY 1 Octobration CALCULATION WORK SHEET 1 DATE: 31 Oct 94								
CALCULATION WORK SHEET 1 DATE: CALCULATION WORK SHEET 1 Training Building		FY94S EEAP FT.	3	X WATER CONSERVAT	S NO	TUDY		1 6
Public Lavatory Community		CALCU	JLATI(ON WORK SHEET 1			DATE:	31 Oct 94
Public Lavatory LPM Description LPM HRS/YR Quantity	FACILITY NO. :	6291		FUNCTION:	• (Training B	uilding	
Existing Fixture System	Occupancy:			Operating Hours:	t			
Description LPM Description LPM HRS/YR Quantity	ECO Numper	Existing Fixture System		Retrofited Fixture Syster	m	Usage	Fixtures	Water Leaks
Public Lavatory 15 Spring Loaded Faucets 4.7 130 1	ECO Type		PM	Description	LPM	HRS/YR	Quantity	Eliminated LPY
LPM	-		15	Spring Loaded Faucets	4.7	130	1	
LPM	Lavatory Sinks							
Floor Mounted Flush Valve LPF	ECO1 TOTAL:		Μď	が、 12、 40年 が、 12、 50年	LPM	を を を を を を を を を を を を を を	-	0
Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 2200 1	2							
Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 2200 1	Misc. Sinks							
Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 2200 1								
Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 2200 1	ECO2 TOTAL:		-PF		LPF	#FL/YR		0
### Repair Kit	3		17	3.5 GPF Flush	13.2	2200	1	
### Company of the co	Water Closets			Repair Kit				
ds LPM HRS/YR 0 LPM HRS/YR 0	T HOL GOOL		ľ					
LPM HRS/YR 0 LPM LPM CHRS/YR 0	ECO3 IOIAL:		긔			#FLJYK		0
LPM: LPM: HRS/YR, 0 LPM: LPM: HRS/YR, 0 LPM: Control of the cont	4							
LPM HRS/YR 0 LPM CONTROL OF CONT	Urinals							
S								
	ECO4 TOTAL:		PM.		LPM	HRS/YR		0
	2							
	Shower Heads							
	ECO5 TOTAL:		PΜ		LPM			0
	9							
	Equipment							
	Related							
	ECO6 TOTAL:		: .				0	0

Systems Engineering and Management Corporation, Knoxville, TN

	ΕΫ́	AS FFA	P FT K	W XON	FR CONSER	EY94S FEAP ET KNOX WA ER CONSERVATION STIIDY	2 OE 2
		73	ALCULAT	ION WO	CALCULATION WORK SHEET 2		1
FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
-	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ECO Number	Annual Water	Annual	Energy	Saving	WATER	Total	Total
ECO Type	 Saving LPY	ELEC	ELEC	GAS MWH	Dollar Saving	Dollar Saving	Dollars Invested
-	89,505			0	\$37.14	\$39.29	\$244.80
Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
ECO1 TOTAL:	89,505	0	0	0	\$37.14	\$39.29	\$244.80
2	0			0	\$0.00	\$0.00	\$0.00
Misc. Sinks							
ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
3	8,360				\$3.47	\$3.47	\$60.05
Water Closets							
ECO3 TOTAL:	8,360				\$3.47	\$3.47	\$60.05
4	0				\$0.00	\$0.00	\$0.00
Urinals							
ECO4 TOTAL:	0				\$0.00	\$0.00	\$0.00
2	0			0	\$0.00	\$0.00	\$0.00
Shower Heads							
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
9							
Equipment							
Related							
							· ·
ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

	FY94S FEAP FT	CNX	KNOX WAT & CONSERVATION STIIDY	SNOL	TIIDY		10
	CALCI	ULATIC	ULATION WORK SHEET 1			DATE:	31 Oct 94
FACILITY NO. :	6535		FUNCTION:	·	Training Building	uilding	
Occupancy:	20		Operating Hours:	•	6	,	
ECO Number	Existing Fixture System	H	Retrofited Fixture System	m	Usage	Fixtures	Water Leaks
ECO Type	Description	LPM	Description	LPM	HRS/YR	Quantity	Eliminated LPY
1	Public Lavatory	9.5	Spring Loaded Faucets	4.7	130	11	15800
Lavatory Sinks							
ECO1 TOTAL:		LPM	The second secon	LPM	を変換した。	11	15800
2							
Misc. Sinks							
ECO2 TOTAL.		101		1.05	#EI ND	c	
1002.10101.		1		12.0	VI 1		
Water Closets	+		Repair Kit	13.2	0000	0	
ECO3 TOTAL:		LPF	10年の日本の日本の日本の日本の日本の日本の日本の日本の日本の日本の日本の日本の日本の	LPE	#FL/YR	8	0
4	Wall Mounted Flush Valve 5	5.68	Install 1.0 GPF Flush Valve	3.79	10000		
Urinals			Repair Kit				
ECO4 TOTAL:		LPM		LPM	LPM HRS/YR	8	0
Shower Heads							
FCOS TOTAL .	を の は は な に な の に の の の の の の の の の の の の の	Md		I DM	を かんできる できる できる できる できる できる できる できる できる できる	c	
9						,	
Equipment							
Related							
ECO6 TOTAL:						0	0

Systems Engineering and Management Corporation, Knoxville, TN

	FVQAS	AS FEAT	D ET KI	M X ON	EP CONSER	P ET KNOY WAS P CONSERVATION STILLY	2 OE 2
			ALCULAT	ION WOI	CALCULATION WORK SHEET 2		4
FACILITY NO. :	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
6666	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ECO Number	Annual Water	Annua	Energy	Saving	WATER	Total	Total
ECO Type	Saving LPY	ELEC KW	ELEC	GAS MWH	Dollar Saving	Dollar Saving	Dollars Invested
	528,455			-	\$219.31	\$232.00	\$2,692.80
Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
ECO1 TOTAL:	528,455	0	0	4-	\$219.31	\$232.00	\$2,692.80
2	0			0	\$0.00	\$0.00	\$0.00
Misc. Sinks							
ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
3	91,200				\$37.85	\$37.85	\$480.38
Water Closets							
ECO3 TOTAL:	91,200				\$37.85	\$37.85	\$480.38
4	151,200				\$62.75	\$62.75	\$509.18
Urinals							
ECO4 TOTAL:	151,200				\$62.75	\$62.75	\$509.18
5	0			0	\$0.00	\$0.00	\$0.00
Shower Heads							
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
9							
Equipment							
Related							
ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

FACILITY NO. 6537 FUNCTION: Administrative Facility		FY94S EEAP FT	F. KN	FY94S EEAP FT. KNOX WATER CONSERVATION STUDY	S NOI	TUDY		10
Existing Fixture System Description LPM Retrofited Fixture System LPM Description LPM HRS/R Quantity		CALC	ULAT	ION WORK SHEET 1			DATE:	31 Oct 94
Existing Fixture System Retrofited Fixture System LPM Description LPM HRS/YR Quantity	FACILITY NO. :	6537		FUNCTION:	-1	Administra	tive Facilit	>
Existing Fixture System Retrofited Fixture System Usage Fixtures	Occupancy:	36		Operating Hours:	,	6		
LPM Description LPM HKS/YR Quantity	ECO Number	Existing Fixture System		Retrofited Fixture Syster	٦	Usage	Fixtures	Water Leaks
LPM	ECO Type	Description	LPM	Description	LPM	HRS/YR	Quantity	Eliminated LPY
LPM	1 Lavatory Sinks							
LPM LPM LPF #FLYYR 0								
Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 2200 5	ECO1 TOTAL:		LPM		LPM		0	0
Floor Mounted Flush Valve 12	2							
Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 2200 5	Misc. Sinks							
Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 2200 5								
Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 2200 5	ECO2 TOTAL:		LPF	The second secon	LPF	#FL/YR	0	0
Comparing the control of the contr	3	Floor Mounted Flush Valve	17	3.5 GPF	13.2	2200	5	
LPE #FLYR 5	Water Closets			Repair Kit				
LPE								
Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 10000 5 Repair Kit LPM HRS/YR 5 S LPM HRS/YR 5 LPM LPM HRS/YR 0	ECO3 TOTAL:		LPE		LPF	#FL/YR	5	0
Repair Kit	4	Wall Mounted Flush Valve	5.68		3.79	10000	5	
S S S S S S S S S S S S S S S S S S S	Urinals			Repair Kit				
	TA FOOL	#1. a2000 38 4 1 1 2 2 4 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2				מאסמו		
	ECO4 101AL.	で関係する はは、100mmの 100mmの 100mm 1	E L		E L	AT /CYLL		0
	C							
	Shower Heads							
		1000					ľ	
	ECOS TOTAL:		L PM		LPM		0	0
	9			•				
	Equipment							
	Related							
A WARRANGER CONTROLL OF THE SECOND CONTROLL OF THE SECOND CONTROLL OF THE SECOND CONTROL	ECOS TOTAL .			(1) 《安徽· · · · · · · · · · · · · · · · · · ·	38.38. The		c	
	ECO IOIAL.				100 PK 10	東京をは あったい		

Systems Engineering and Management Corporation, Knoxville, TN

	FYS	FY94S EEAP		M XON	ER CONSER	FT. KNOX WA ER CONSERVATION STUDY	2 OF 2
		CAI	1 11	IOM MOI	CULATION WORK SHEET 2		
FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		#WWH
	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ECO Number	Annual Water	Annua	Energy	Saving	WATER	Total	Total
ECO Type	Saving LPY	ELEC	ELEC	GAS MWH	Dollar Saving	Dollar Saving	Dollars Invested
1	0			0	\$0.00	\$0.00	\$0.00
Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
ECO1 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
2	0			0	\$0.00	\$0.00	\$0.00
Misc. Sinks							
ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
က	41,800				\$17.35	\$17.35	\$300.24
Water Closets							
ECO3 TOTAL:	41,800				\$17.35	\$17.35	\$300.24
7	94,500				\$39.22	\$39.22	\$318.24
Urinais							
ECO4 TOTAL:	94,500				\$39.22	\$39.22	\$318.24
5	0			0	\$0.00	\$0.00	\$0.00
Shower Heads							
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
9							
Related							
	The state of the s						
ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

	FY94S EEAP F	T. KN	FY94S EEAP FT. KNOX WALER CONSERVATION STUDY	S NO	TUDY		100
	CAL	CULAT	CALCULATION WORK SHEET 1			DATE:	31 Oct 94
FACILITY NO. :	6239		FUNCTION:	,	Enlisted Barracks	arracks	
Occupancy:	50		Operating Hours:	·	15		
ECO Number	Existing Fixture System		Retrofited Fixture System	æ	Usage	Fixtures	Water Leaks
ECO Type	Description	LPM	Description	LPM	~	Quantity	Eliminated LPY
1	Public Lavatory	9.5	Spring Loaded Faucets	4.7	730	12	
Lavatory Sinks	Private Lavatory	23	Spring Loaded Faucets	4.7	130	9	
ECO1 TOTAL:		LPM		LPM		18	0
2	Laundry Sink	45	Install Aerators	9.5	2080	၁	
Misc. Sinks							
- INTOT		ם -		1	10N 13#	ç	c
ECUZ IDIAL.		בו			#FUT#	?	0
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	3000	16	
Water Closets			Repair Kit				
FCO3 TOTAL		I PF	A. TANK WAS LINES WAS ARREST OF	3d	#FI /YR	16	0
7	Wall Mounted Flush Valve	5.68	Install 1 0 GPF Flush Valve	3.79	10428	7	
Urinals			Repair	5	0.4101	-	
ECO4 TOTAL:		LPM		LPM	HRS/YR	7	0
5							
Shower Heads							
- 4101							
ECOS IOIAL.		∑ L L		- L		>	0
9							
Equipment							
Related							
ECO6 TOTAL:						0	0

Systems Engineering and Management Corporation, Knoxville, TN

FACILITY NO : Water Rate: 0.42 \$/KL Energy Rate 6539 Gas Rate: 10.51 \$/MWH Demand Rate ECO Number Annual Water Annual Energy Saving WATER ECO Type Saving LPY KW KWH Dollar Saving Lavatory Sinks 911,430 7 \$1,303.25 Lavatory Sinks 13,291,200 0 9 \$1,681.53 Misc. Sinks 13,291,200 0 9 \$55.16 ECO2 TOTAL: 13,291,200 0 30 \$55.16	Energy Rate: Demand Rate: WATER \$1,303.29 \$378.24 \$378.24 \$55.16 \$55.16 \$55.16	Total Dollar Saving \$1,378.74 \$400.14 \$1,778.88 \$374.46	\$/KWH \$/KW Total Dollars Invested \$2,937.60 \$1,468.80 \$1,406.40 \$29.09
Gas Rate: 10.51 \$/MWH Pr Annual Water Annual Energy Saving LPY ELEC FWH WWH MWH MWH <td></td> <td></td> <td>\$/KW</td>			\$/KW
Saving LPY KW KWH 3,140,460 8,11,430 4,051,890 13,291,200 13,291,200 0 0		Total Dollar Saving \$1,378.74 \$400.14 \$1,778.88 \$374.46	Total Dollars Invested \$2,937.60 \$1,468.80 \$4,406.40 \$29.09
Saving LPY KW KWH 3,140,460 8 911,430 4,051,890 0 0 13,291,200 s 13,291,200 0 0		\$1,378.74 \$400.14 \$1,778.88 \$374.46	\$2,937.60 \$2,937.60 \$1,468.80 \$4,406.40 \$29.09
3,140,460 911,430 4,051,890 0 0 13,291,200 s		\$1,378.74 \$400.14 \$1,778.88 \$374.46	\$2,937.60 \$1,468.80 \$4,406.40 \$29.09
ks 911,430 4,051,890 0 0 13,291,200 s 13,291,200 0 0	\$378.24 \$1,681.53 \$55.16 \$55.16 \$75.70	\$400.14 \$1,778.88 \$374.46	\$1,468.80 \$4,406.40 \$29.09
4,051,890 0 0 0 13,291,200 0 0 0 13.291,200 0 0	\$1,681.53 \$55.16 \$55.16 \$75.70	\$1,778.88 \$374.46 \$374.46	\$4,406.40 \$29.09
13,291,200 13.291,200 0 0	\$55.16 \$55.16 \$75.70	\$374.46 \$374.46	\$29.09
13.291.200 0 0	\$55.16 \$75.70	\$374.46	
13,291,200 0 0	\$55.16 \$75.70	\$374.46	
	\$75.70		\$29.09
3 182,400		\$75.70	\$960.77
Water Closets	The second secon		
ECO3 TOTAL: 182,400	\$75.70	\$75.70	\$960.77
4 137,962	\$57.25	\$57.25	\$445.54
Urinals			
ECO4 TOTAL: 137,962	\$57.25	\$57.25	\$445.54
0 0 0	\$0.00	\$0.00	\$0.00
Shower rieads			
ECO5 TOTAL: 0 0 0 0	\$0.00	\$0.00	\$0.00
9			
Equipment			
Related			
ECO6 TOTAL: 0 0 0 0	\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

	FY94S EEAP FT. KNOX WA	⊢ XN	OX WA R CONSERVATION STUDY	S NO	TUDY		1 6 2
	CAL	CULAT	立			DATE:	31 Oct 94
FACILITY NO.:	6541		FUNCTION:	,	Enlisted Barracks	arracks	
Occupancy:	220		Operating Hours:	,	15		
ECO Number	Existing Fixture Systen		Retrofited Fixture System	E	Usage	Fixtures	Water Leaks
ECO 1ybe	Description Public Layatory	L P W	Description	L P W	HKS/YK	Quantity	Eliminated LPY
Lavatory Sinks	Private Lavatory	9.5	Spring Loaded Faucets	4.7	130	200	
						ı	
ECO1 TOTAL:		LPM		LPM		32	0
2 Mice Sieles	Laundry Sink	45	Install Aerators	9.5	2080	5	
WISC. SHIKS							
ECO2 TOTAL:		LPF		LPF	#FL/YR	5	0
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	8000	22	
Water Closets			Repair Kit				
ECO3 TOTAL .		1 00		מ	#E! ∨D	22	c
LCC3 101AL.	- 10/V 40: 10 10 20 20 10 10 10 10 10 10 10 10 10 10 10 10 10	בר ה ה	\	777	#1714 #1714	77	>
Urinals	VVali Mounted Fiash Valve	00.0	Repair Kit	o./3	70000	C.	
ECO4 TOTAL:		LPM		LPM	HRS/YR	15	0
5							
Shower Heads							
ECO5 TOTAL:		LPM		LPM		0	0
9							
Equipment							
Related							
ECO6 TOTAL:						c	
SYSTEMS CORP	ORP	Syste	Systems Engineering and Management Corporation,	nent Co	orporation		Knoxville, TN

Systems Engineering and Management Corporation, Knoxville, TN

CULATION WORK SHEET 2 \$/KL Energy Rate: \$/KWH \$/MWH Demand Rate: \$/KWH ELEC GAS WATER Total \$/KWH ELEC GAS WATER Total \$/KWH ELEC GAS WATER Total \$/KWH ELEC GAS \$3,258.23 \$3,446.84 \$ 0 \$38.68 \$3,446.84 \$ \$ 0 \$18.68 \$3,446.84 \$ \$ 0 \$18.68 \$3,446.84 \$ \$ 0 \$31,93 \$624.11 \$ \$ \$277.55 \$277.55 \$ \$ \$235.30 \$235.30 \$ \$ \$235.30 \$0.00 \$0.00 \$ \$0.00 \$0.00 \$0.00 \$ \$0.00 \$0.00 \$0.00 \$		FYS	FY94S EEAP	1 _	M XON	ER CONSER	FT. KNOX WALER CONSERVATION STUDY	2 OF 2
TY NO : Water Rate: 0.42 \$/KL Energy Rate: \$/KVM E541 E68 Rate: 10.51 \$/MWH Demand Rate: 5/KWM ELEC 23.268.23 \$3.446.84 E40.92 E			CA		IOM NOI	RK SHEET 2		
Cas Rate: 10.51 \$/MWH Demand Rate: \$/KW O Number Annual Water Annual Energy Saving KW WATER Total TOTAL: 7,851,150 18 \$3,258.23 \$3,46.84 1 7,851,150 0 18 \$3,258.33 \$40.92 1 7,851,150 0 18 \$3,258.91 \$40.92 2 2,152,000 0 61 \$91.93 \$624.11 2 2,152,000 0 668,800 51 \$91.93 \$624.11 3 668,800 0 668,800 \$277.55 \$277.55 ar Closets \$2,000 \$235.30 \$235.30 4 567,000 0 \$235.30 \$5.00 Jurinals 50.00 \$0 \$0.00 5 60.00 \$0.00 \$0.00 \$0.00 6 will plument \$0.00 \$0.00 \$0.00 6 will plument \$0.00 \$0.00 \$0.00	FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
O Number Annual Water Annual Energy Saving ELEC GAS WATER Total 20 Type Saving LPY KW KWH MWH Dollar Saving 53.258.23 B.3.446.84 1 7.851.150 0 18 \$3.258.23 \$3.446.84 1 7.944,360 0 18 \$3.296.91 \$3.487.76 2 22,152,000 0 51 \$91.93 \$624.11 2 22,152,000 0 51 \$91.93 \$624.11 3 5c. Sinks 3 \$624.11 \$624.11 3 668,800 0 51 \$91.93 \$624.11 4 567,000 0 57 \$277.55 \$277.55 4 567,000 0 \$0 \$0.00 \$0.00 5 0 0 \$0.00 \$0.00 \$0.00 5 0 0 \$0.00 \$0.00 \$0.00 6 6 0 0 \$0.00 \$0.00	- - - - -	Gas Rate:		\$/MWH		Demand Rate:		\$/KW
COType Saving LPY KW KWH MWH MWH Dollar Saving NWH Dollar Saving NWH IMWH Dollar Saving NWH IMWH Dollar Saving NWH IMWH Dollar Saving NMH IMWH MAH	ECO Number	Annual Water	la l		Saving	WATER	Total	Total
1 7,851,150 18 \$3,258.23 \$3,46.84 Itory Sinks 93,210 0 \$38.68 \$40.92 TOTAL: 7,944,360 0 18 \$3,296.91 \$3,487.76 2 22,152,000 0 18 \$3,296.91 \$3,487.76 2 c. Sinks 2 22,152,000 0 668,800 51 \$91.93 \$624.11 3 c. Sinks 3 668,800 0 51 \$91.93 \$624.11 TOTAL: 668,800 0 51 \$217.55 \$277.55 4 567,000 \$235.30 \$235.30 \$235.30 Vinals 5 0 \$0.00 \$0.00 4 567,000 0 \$0.00 \$0.00 5 0 \$0.00 \$0.00 \$0.00 6 0 \$0.00 \$0.00 \$0.00 6 0 0 \$0.00 \$0.00 6 0 0 \$0.00 \$0.00	ECO Type			ELEC KWH	GAS	Dollar Saving	Dollar Saving	Dollars Invested
ttory Sinks 93,210 0 \$38,68 \$40,92 TOTAL: 7,944,360 0 18 \$3,296,91 \$3,487.76 2 22,152,000 51 \$91,93 \$624.11 sc. Sinks 10TAL: 22,152,000 0 51 \$91,93 \$624.11 TOTAL: 668,800 0 51 \$91,93 \$624.11 sc. Sinks 3 668,800 668,800 824.11 ar Closets For Closets 8277.55 8277.55 ar Closets \$277.55 \$277.55 A 567,000 \$235.30 Uninals \$257,000 \$235.30 Solono \$235.30 \$235.30 Solono \$0 \$0.00 For One \$0.00 \$0.00	~	13,	l		18	\$3,258.23	\$3,446.84	\$7,344.00
TOTAL: 7,944,360 0 18 \$3,296,91 \$3,487.76 2 22,152,000 51 \$91.93 \$624.11 sc. Sinks TOTAL: 22,152,000 0 51 \$91.93 \$624.11 TOTAL: 22,152,000 0 51 \$91.93 \$624.11 a 668,800 0 \$277.55 \$277.55 er Closets \$277.55 \$277.55 \$277.55 TOTAL: 668,800 \$235.30 \$235.30 Urinals \$0 \$0 \$0.00 \$0.00 wer Heads \$0 \$0.00 \$0.00 \$0.00 E COTAL: \$0.00 \$0.00 \$0.00 Related COTAL: \$0.00 \$0.00 \$0.00	Lavatory Sinks	93,210			0	\$38.68	\$40.92	\$489.60
s 22,152,000 51 \$91.93 \$624.11 s 22,152,000 0 51 \$94.93 \$624.11 668,800 0 51 \$277.55 \$277.55 ts 668,800 \$277.55 \$277.55 668,800 \$277.55 \$277.55 668,800 \$277.55 \$277.55 668,800 \$277.55 \$237.53 668,800 \$235.30 \$235.30 668,800 \$0.00 \$0.00 4 \$0.00 \$0.00 6 \$0.00 \$0.00 6 \$0.00 \$0.00 5 \$0.00 \$0.00 6 \$0.00 \$0.00		7,944,360	0	0	18	\$3,296.91	\$3,487.76	\$7,833.60
22,152,000 0 51 \$91.93 \$624.11 668,800 0 577.55 \$277.55 668,800 \$277.55 \$277.55 668,800 \$277.55 \$277.55 567,000 \$235.30 \$235.30 ds 0 0 \$0.00 t 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00	2 Misc. Sinks	22,152,000			51	\$91.93	\$624.11	\$48.48
ts 668,800 0 0 51 \$91.93 \$624.11 668,800 0 0 51 \$277.55 \$277.5								
45 \$277.55 \$277.55 45 \$68,800 \$277.55 \$277.55 668,800 \$277.55 \$277.55 567,000 \$235.30 \$235.30 45 0 \$0.00 \$0.00 45 0 \$0.00 \$0.00 46 \$0.00 \$0.00 \$0.00 4 \$0.00 \$0.00 \$0.00 4 \$0.00 \$0.00 \$0.00	ECO2 TOTAL:	22,152,000	0	0	51	\$91.93	\$624.11	\$48.48
668,800 \$277.55 \$277.55 567,000 \$235.30 \$235.30 567,000 \$0 \$235.30 \$235.30 ds 0 \$0 \$0.00 t 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00	3 Water Closets	668,800				\$277.55	\$277.55	\$1,321.06
567,000 \$235.30 \$235.30 567,000 \$235.30 \$235.30 ds 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00	ECO3 TOTAL:	668.800				\$277.55	\$277.55	\$1,321,06
567,000 \$235.30 \$235.30 \$235.30 ds 0 0 \$0.00 \$0.00 t 0 0 \$0.00 \$0.00 t 0 0 \$0.00 \$0.00	4	567,000				\$235.30	\$235.30	\$954.72
567,000 \$235.30 \$235.30 \$235.30 ds 0 \$0.00 \$0.00 ds 0 0 \$0.00 t t t \$0.00 t 0 0 \$0.00 t 0 0 \$0.00	Urinals							
00.0\$ 00.0\$ 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ECO4 TOTAL:	567,000				\$235.30	\$235.30	\$954.72
00.0\$ 00.0\$ 0 0 0 0 0 0 0 0 0 0 0 0 0 0	5 Shower Heads	0			0	\$0.00	\$0.00	\$0.00
00.0\$ 00.00 0 0 0	ECOS TOTAL:	o	0	c	o	\$0.00	\$0.00	\$0.00
00.0\$ 00.00 0 0 0	9							
00.0\$ 00.00 0 0 0	Equipment							
00.0\$ 0.00 0 0 0	Related							
	ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
		11						

Systems Engineering and Management Corporation, Knoxville, TN

	EVOAS EEAD ET KNOV MA	T KNIC		O NO	70117		7
	7 1343 EEAP 7) - -	A WATER CONSERVATION STODI	0 N O	1001		7
	CAL	CULATI	CALCULATION WORK SHEET 1			DATE:	29 Oct 94
FACILITY NO. :	6544		FUNCTION:		Dining		
Occupancy:	3 Meals / Day		Operating Hours:	,			
ECO Number	Existing Fixture System	- WG	Retrofited Fixture System	n -	Usage	Fixtures	Water Leaks
ECO Type	Lavatory Faucets	9.5	Spring Loaded Faucets	L F W 4	730 730	Quantity 21	Eliminated LPT
Lavatory Sinks						i	
ECO1 TOTAL:		LPM		LPM		21	0
2 Misc. Sinks							
ECO2 TOTAL:		LPF		LPF	#FL/YR	0	0
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	10950	20	
Water Closets			Kepair Kit				
ECO3 TOTAL:		LPF		LPF	#FL/YR	20	0
4	Wall Mounted Flush Valve	2.68	Install 1.0 GPF Flush Valve	3.79	10950	10	
Urinals			Repair Kit				
ECO4 TOTAL:		LPM		LPM	HRS/YR	10	0
5							
Shower Heads							
ECO5 TOTAL:		LPM		LPM		0	0
9	2 Comp. Sink (2 faucets)	17	Install Aerators	9.5	1460	-	
Equipment							
Related							
ECO6 TOTAL:						1	0
SYSTEMS CORP	CORP	Systen	Systems Engineering and Management Corporation,	nent C	orporation		Knoxville, TN
		•)		•		

Systems Engineering and Management Corporation, Knoxville, TN

	FY9	FY94S EEAP		FT. KNOX WA		ER CONSERVATION STUDY	2 OF 2
		CAL		OM NOI			
FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:	\$	жж.
	Gas Rate:	10.51	\$/MWH		Demand Rate:	\$	\$/KW
ECO Number	Annual Water	Annual	Energy	Saving	WATER	Total	Total
ECO Type	Saving LPY	WX ELEC	ELEC KWH	GAS	Dollar Saving	Dollar Saving	Dollars Invested
1	5,495,805			8	\$2,280.76	\$2,369.88	\$4,284.00
Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO1 TOTAL:	5,495,805	0	0	8	\$2,280.76	\$2,369.88	\$4,284.00
2	0			0	\$0.00	\$0.00	\$0.00
Misc. Sinks	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
3	832,200				\$345.36	\$345.36	\$1,000.80
Water Closets	0				\$0.00	\$0.00	\$0.00
	0				\$0.00	\$0.00	\$0.00
ECO3 TOTAL:	832,200				\$345.36	\$345.36	\$1,000.80
4	206,955				\$85.89	\$85.89	\$530.40
Urinals	0				\$0.00	\$0.00	\$0.00
	0				\$0.00	\$0.00	\$0.00
ECO4 TOTAL:	206,955				\$85.89	\$85.89	\$530.40
5	0			0	\$0.00	\$0.00	\$0.00
Shower Heads	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
9	000'259			_	\$2.73	\$13.38	\$8.08
Equipment	0			0	\$0.00	\$0.00	\$0.00
Related	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO6 TOTAL:	657,000	0	0	-	\$2.73	\$13.38	\$8.08

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	FY94S EEAP F	Y Y	FY94S EEAP FT. KNOX WAYER CONSERVATION STUDY	S NOI	TUDY		10
	CAL	CULAT	CULATION WORK SHEET 1			DATE:	31 Oct 94
FACILITY NO. :	6546		FUNCTION:	·	Enlisted Barracks	arracks	
Occupancy:	220	1	Operating Hours:	·	15		
ECO Number	Existing Fixture System	u	Retrofited Fixture System	E	Usage	Fixtures	Water Leaks
ECO Type		LPM	Description	LPM	HRS/YR	Quantity	Eliminated LPY
	Public Lavatory	9.5	Spring Loaded Faucets	4.7	730	30	
Lavatory Sinks	Private Lavatory	28	Spring Loaded Faucets	4.7	130	-	
- 4 + O - 1						į	
ECO1 IDIAL:		LFB		Lra		31	0
2	Laundry Sink	23	Install Aerators	9.5	2080	4	
Misc. Sinks			The state of the control of the cont				
ECO2 TOTAL:		LPF		LPF	#FL/YR	4	0
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	8000	17	
Water Closets			Repair Kit				
FCO3 TOTAL		I PF		1d -	#FI WR	17	0
4	Wall Mounted Flush Valve	5.68	Install 1 0 GPF Flush Valve	3 79	20000	: α	
Urinals			Repair				
1							
ECO4 101AL:		LPR		LPM	HRS/YR	8	0
5							
Silower neaus	The state of the s						
ECO5 TOTAL:		LPM		LPM		0	0
9							
Equipment							
Related							
ECO6 TOTAL:						0	0

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		AC FFA	7 11 0	NOV IA		Valita Moray Anda da Constant and Store	0 10
		THE LEFT	AI CUI AT	NOV WOL	CAI CUI ATION WORK SHEET 2	VALIDIN SI DEL	2 OF 2
· ON ATI IIO ATI	Wotor Data:	0.40	17/4		Enorgy Doto:		
FACILIT NO. : 6546	water Kate:	0.42	4/ ₽		Energy Kate:		U\\\\¢
	Gas Rate:	10.51	#WM/\$		Demand Rate:		\$/KW
ECO Number	Annual Water	Annua	Energy	Saving	WATER	Total	Total
ECO Type	Saving LPY	ELEC KW	ELEC KWH	GAS	Dollar Saving	Dollar Saving	Dollars Invested
-	E			18	\$3,258.23	\$3,446.84	\$7,344.00
Lavatory Sinks	190,905			0	\$79.23	\$83.81	\$244.80
ECO1 TOTAL:	8,042,055	0	0	18	\$3,337.45	\$3,530.65	\$7,588.80
2	6,739,200			15	\$27.97	\$189.87	\$38.78
Misc. Sinks							
ECO2 TOTAL:	6,739,200	0	0	15	\$27.97	\$189.87	\$38.78
3	516,800				\$214.47	\$214.47	\$1,020.82
Water Closets							
ECO3 TOTAL:	516,800				\$214.47	\$214.47	\$1,020.82
4	302,400				\$125.50	\$125.50	\$509.18
Urinals							
ECO4 TOTAL:	302,400				\$125.50	\$125.50	\$509.18
5	0			0	\$0.00	\$0.00	\$0.00
Shower Heads							
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
9							
Equipment	-		-				
Related							The particular decreases and the second seco
ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

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	FY94S EEAP FT. KNOX WAT	T X N	OX WAT & CONSERVATION STUDY	S NOI	TUDY		10
	CALC	CULAT	CALCULATION WORK SHEET 1			DATE:	31 Oct 94
FACILITY NO. :	6568		FUNCTION:	'	Self Sv. Sup. Ctr.	ıp. Ctr.	
Occupancy:	20		Operating Hours:	·	3		
ECO Numper	Existing Fixture System		Retrofited Fixture System	ш	Usage	Fixtures	Water Leaks
ECO Type	Description	ПРМ	Description	LPM	HRS/YR	Quantity	Eliminated LPY
_	Public Lavatory	9.2	Spring Loaded Faucets	4.7	52	4	
Lavatory Sinks	Public Lavatory	23	Spring Loaded Faucets	4.7	52	3	
ECO1 TOTAL:		LPM	では、大学を表す。 一切で変われてきる。	LPM	をからいい	7	0
2	Service Sink	23	Install Aerators	9.5	52	2	
Misc. Sinks							
ECO2 TOTAL:	(株) (水) (水) (水) (水) (水) (水) (水) (水) (水) (水	LPF	· · · · · · · · · · · · · · · · · · ·	LPF	#FL/YR	2	0
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	2200	7	
Water Closets			Repair Kit				
ECO3 TOTAL:		LPF		LPF	#FL/YR	7	0
4	Wall Mounted Flush Valve	5.68	Install 1.0 GPF Flush Valve	3.79	7000	4	
Urinals			Repair Kit				
ECO4 IOIAL:		LPM		LPM	LPM HRS/YR	4	0
Shower Heads							
ECO5 TOTAL:		LPM		LPM		0	0
9							
Equipment							
Related							
ECO6 TOTAL:			1000年 日本の日本の日本の日本の日本の日本の日本の日本の日本の日本の日本の日本の日本の日		報告をできるというという。	0	0

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FACILITY NO.: Water Rate: 0.42 \$/K FILE Energy Rate: \$/K \$/K ECO Number Annual Water Lanual Energy Saving Lanual Energy Saving WATER Total Total ECO Type Saving LPY KW KWH MWH Dollar Saving S\$75.65 \$80.03 \$878.60 \$878.60 \$878.60 \$878.60 \$878.60 \$878.60 \$878.60 \$878.60 \$878.60 \$878.60 \$878.60 \$878.60 \$878.60 \$878.60 \$878.60 \$878.00	Water Rate: 0.42 \$/KL Gas Rate: 10.51 \$/MWH T Annual Water Annual Energy & KW \$/KWH 74,568 KW KWH 74,568 C 0 182,286 0 0 84,240 0 0 58,520 0 0 58,520 0 0 52,920 0 0 52,920 0 0 6 0 0 0 9 0 0 0 18 0 0 0 18 0 0 0 18 0 0 0 18 0 0 0 18 0 0 0 18 0 0 0 18 0 0 0 18 0 0 0 18 0 0 0 18 0 0 0 18 0 0 0 </th <th>Water Rate: 0.42 \$/KL Gas Rate: 10.51 \$/MWH Annual Water Annual Energy & ELEC ELEC ELEC ELEC ELEC ELEC ELEC EL</th> <th></th> <th>FY</th> <th>FY94S EEAP CAI</th> <th></th> <th>M XON</th> <th>FT. KNOX WALER CONSER LCULATION WORK SHEET 2</th> <th>FT. KNOX WALER CONSERVATION STUDY CULATION WORK SHEET 2</th> <th>2 OF 2</th>	Water Rate: 0.42 \$/KL Gas Rate: 10.51 \$/MWH Annual Water Annual Energy & ELEC ELEC ELEC ELEC ELEC ELEC ELEC EL		FY	FY94S EEAP CAI		M XON	FT. KNOX WALER CONSER LCULATION WORK SHEET 2	FT. KNOX WALER CONSERVATION STUDY CULATION WORK SHEET 2	2 OF 2
Cas Rate: 10.51 \$\text{\$\text{\$f}} MWH Pemand Rate: Total Saving LPY KW KWH MWH Dollar Saving LPY KWH KWH MWH Dollar Saving LPX KWH KWH MWH Dollar Saving LPX KWH KWH MWH Dollar Saving S30.95 \$32.74	COO Number Annual Water Annual Energy ELEC ELEC	Cas Rate: 10.51 \$/MWH	FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
Saving LPY KWH MWH Dollar Saving FLEC ELEC GAS S30.95 \$32.74	ECO Type Saving LPY RW Annual ELEC RWH Annual ELEC BAS BASUNG FLEC BLEC BAS BASUNG FLEC BLEC BAS BASUNG Total Total Total Instance Insta	ECO Number Annual Water Annual Energy ECO Type Saving LPY KW KWH 1 74,568 CELEC ELEC ELCC D O		Gas Rate:	1	\$/MWH		Demand Rate:		\$/KW
Saving LPY KW KWH Dollar Saving FLEC ELEC GAS MWH Dollar Saving FJ FJ FJ FJ FJ FJ FJ F	ECO Type Saving LPY KW KWH 1 74,568 KWH KWH Lavatory Sinks 182,286 0 0 ECO1 TOTAL: 256,854 0 0 Misc. Sinks 84,240 0 0 ECO2 TOTAL: 84,240 0 0 Water Closets ECO3 TOTAL: 58,520 0 Urinals 6 0 0 ECO3 TOTAL: 52,920 0 0 Shower Heads 0 0 0 ECO5 TOTAL: 0 0 0 6 Equipment 6 6 EQUIPMENT 0 0 0 ECO5 TOTAL: 0 0 0 6 EQUIPMENT 0 0 6 ECO6 TOTAL: 0 0 CCO5 TOTAL: 0 0 0	T4.568	ECO Number	Annual Water	ᢛᡰ		Saving	WATER	Total	Total
nks 74,568 0 \$30,95 \$32.74 niks 182,286 0 \$75,65 \$80.03 i: 256,854 0 0 1 \$106.59 \$112.77 i: 84,240 0 0 0 \$0.35 \$0.37 i: 84,240 0 0 \$0.35 \$0.37 i: 58,520 \$24.29 \$24.29 ets \$2,920 \$24.29 \$24.29 i: 52,920 \$21.96 \$21.96 i: 52,920 \$0.00 \$0.00 it 0 \$0.00 \$0.00 it 0 \$0.00 \$0.00 i: 0 \$0.00 \$0.00	i. 256,854 0 0 ii. 256,854 0 0 iii. 84,240 0 0 iii. 84,240 0 0 iii. 84,240 0 0 iii. 58,520 0 0 iii. 52,920 0 0 iii. 0 0 0 0 iii. 0 0 0 0 iii. 0 0 0 0	it 182,286	ECO Type			ELEC KWH	GAS	Dollar Saving	Dollar Saving	Dollars Invested
182,286	i. 256,854 0 0 0 84,240 0 0 0 68,520 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	i. 256,854 0 0 0 84,240 0 0 0 684,240 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1	74,568			0	\$30.95	\$32.74	\$979.20
: 256,854 0 0 1 \$106.59 \$112.77 : 84,240 0 0 \$0.35 \$0.37 : 84,240 0 0 \$0.35 \$0.37 ets \$2,240 \$24.29 \$24.29 : 58,520 \$24.29 \$24.29 : 52,920 \$21.96 \$21.96 ads 0 \$0.00 \$0.00 sds 0 \$0.00 \$0.00 : 0 \$0.00 \$0.00 : 0 \$0.00 \$0.00 : 0 \$0.00 \$0.00	SS 84,240 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Est. 256,854 0 0 0 84,240 0 0 0 68,520 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Lavatory Sinks	182,286			0	\$75.65	\$80.03	\$734.40
\$6,240 \$0 \$0.35 \$0.37 \$84,240 \$0 \$0 \$0.35 \$0.37 ets \$8,520 \$0.37 \$24.29 \$24.29 ets \$52,920 \$21.96 \$21.96 \$21.96 \$0 \$0 \$0.00 \$0.00 \$0.00 \$1 \$0 \$0 \$0.00 \$0.00 \$1 \$1 \$21.96 \$21.96 \$21.96 \$2 \$0 \$0 \$0.00 \$0.00 \$2 \$0.00 \$0.00 \$0.00 \$0.00 \$2 \$0.00 \$0.00 \$0.00 \$0.00	## 84,240	## 84,240 ## 84,240 ## 84,240 ## 84,240 ## 9	ECO1 TOTAL:	256,854	0	0	1	\$106.59	\$112.77	\$1,713.60
S4,240	ets 84,240 645 645 645 658,520 652,920 600 600 600 600 600 600 600	sets E4,240 0 0 58,520 52,920 0 348 0 0 0 14 0 0 0 0 0 0 SAS 0 0 0 0 0 SAS 0 0 0 0 SAS 0 0 0 SAS SAS	2	84,240			0	\$0.35	\$0.37	\$19.39
84,240 0 0 \$0.35 \$0.37 ets 58,520 \$24.29 \$24.29 : 52,920 \$21.96 \$21.96 : 52,920 \$0 \$0.00 ads 0 \$0.00 \$0.00 : 0 \$0.00 \$0.00 : 0 \$0.00 \$0.00 : 0 \$0.00 \$0.00 : 0 \$0.00 \$0.00 : 0 \$0.00 \$0.00	## 84,240 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	## 84,240 0 0 0 0 0 ets	Misc. Sinks							
58,520 \$24.29 \$24.29 \$24.29 \$24.29 \$22.50 \$2.920 \$21.96 \$21.96 \$21.96 \$22.920 \$21.96	ets 58,520	ets 58,520	ECO2 TOTAL:	84,240	0	0	0	\$0.35	\$0.37	\$19.39
58,520 \$24.29 \$24.29 \$24.29 \$2.900 \$2.920 \$2.920 \$2.920 \$21.96 \$21.96 \$21.96 \$2.920 \$2.920 \$2.920 \$2.920 \$2.920 \$2.000 \$0.	: 58,520 : 52,920 : 52,920 : 0 0 0 : 0 0 0 : 0 0 0 : 0 0 0	: 58,520 : 52,920 : 52,920 : 0 0 0 : 0 0 0 : 0 0 0 : 0 0 0	3	58,520				\$24.29	\$24.29	\$420.34
58,520 \$24.29 \$24.29 52,920 \$21.96 \$21.96 52,920 \$21.96 \$21.96 ads 0 \$0.00 \$0.00 it 0 0 \$0.00 it 0 0 \$0.00 it 0 0 \$0.00 it 0 \$0.00 \$0.00	: 58,520 52,920 : 52,920 : 0 0 0 0 : 0 0 0 0 : 0 0 0	: 58,520 52,920 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Water Closets							
52,920	52,920 1	52,920 : 52,920 : 0 0 0 0 : 0 0 0 0 : 0 0 0 0 S CORP	ECO3 TOTAL:	58,520				\$24.29	\$24.29	\$420.34
: 52,920 \$21.96 \$21.96 3ds 0 0 \$0.00 : 0 0 0 \$0.00 : 0 0 0 \$0.00 : 0 0 0 \$0.00 : 0 0 0 \$0.00	: 52,920 0 0 0 0 0 0 0 0 0 0 S CORP	: 52,920 0 0 0 0 : 0 0 0 0 S CORP	4	52,920				\$21.96	\$21.96	\$254.59
: 52,920 \$21.96 \$21.96 ads 0 \$0.00 \$0.00 : 0 0 0 \$0.00 : 0 0 0 \$0.00 : 0 0 \$0.00 \$0.00 : 0 0 0 \$0.00	: 52,920 0 0 0 0 : 0 0 0 : 0 0 0	: 52,920 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Urinals							
ads 0 0 \$0.00 \$0.00 : 0 0 0 0 \$0.00 : 0 0 0 0 \$0.00 : 0 0 0 \$0.00 : 0 0 0 \$0.00 : 0 0 0 \$0.00 : 0 0 0 \$0.00 : 0 0 0 \$0.00 : 0 0 0 0 \$0.00 : 0 0 0 0 \$0.00 : 0 0 0 0 \$0.00 : 0 0 0 0 \$0.00 : 0 0 0 0 \$0.00 : 0 0 0 0 \$0.00 : 0 0 0 0 \$0.00 : 0 0 0 0 \$0.00 : 0 0 0 0 \$0.00 : 0 0 0 0 0 \$0.00 : 0 0 0 0 0 \$0.00 : 0 0 0 0 0 \$0.00 : 0 0 0 0 0 \$0.00 : 0 0 0 0 0 \$0.00 : 0 0 0 0 0 \$0.00 : 0 0 0 0 0 \$0.00 : 0 0 0 0 0 \$0.00 : 0 0 0 0 0 \$0.00 : 0 0 0 0 0 0 \$0.00 : 0 0 0 0 0 0 \$0.00 : 0 0 0 0 0 0 \$0.00 : 0 0 0 0 0 0 \$0.00 : 0 0 0 0 0 0 \$0.00 : 0 0 0 0 0 0 \$0.00 : 0 0 0 0 0 0 \$0.00 : 0 0 0 0 0 \$0.00 : 0 0 0 0 0 \$0.00 : 0 0 0 0 0 \$0.00 : 0 0 0 0 0 \$0.00 : 0 0 0 0 0 0 \$0.00 : 0 0 0 0 0 0 \$0.00 : 0 0 0 0 0 0 \$0.00 : 0 0 0 0 0 0 \$0.00 : 0 0 0 0 0 0 \$0.00 : 0 0 0 0 0 0 \$0.00 : 0 0 0 0 0 0 \$0.00 : 0 0 0 0 0 0 \$0.00 : 0 0 0 0 0 0 \$0.00 : 0 0 0 0 0 0 \$0.00 : 0 0 0 0 0 0 \$0.00 : 0 0 0 0 0 0 \$0.00 : 0 0 0 0 0 0 0 \$0.00 : 0 0 0 0 0 0 0 \$0.00 : 0 0 0 0 0 0 0 0 \$0.00 : 0 0 0 0 0 0 0 0 \$0.00 : 0 0 0 0 0 0 0 0 \$0.00 : 0 0 0 0 0 0 0 0 \$0.00 : 0 0 0 0 0 0 0 0 \$0.00 : 0 0 0 0 0 0 0 0 : 0 0 0 0 0 0 0 0 : 0 0 0 0 0 0 0 0 : 0 0 0 0 0 0 0 : 0 0 0 0 0 0 0 : 0 0 0 0 0 0 0 : 0 0 0 0 0 0 : 0 0 0 0 0 0 : 0 0 0 0 0 0 0 : 0 0 0 0 0 0 : 0 0 0 0 0 0 : 0 0 0 0 0 0 : 0 0 0 0 0 0 : 0 0 0 0 0 0 : 0 0 0 0 0 0 : 0 0 0 0 0 0 : 0 0 0 0 0 0 : 0 0 0 0 0 0 : 0 0 0 0 0 0 : 0 0 0 0 0 0 : 0 0 0 0 0 0 0 : 0 0 0 0 0 0 0 : 0 0 0 0 0 0 0 : 0 0 0 0 0 0 0 : 0 0 0 0 0 0 0 0 : 0 0 0 0 0 0 0 : 0 0 0 0 0 0 0 0	ads 0 0 0 0 11 11 11 11 11 11 11 11 11 11 1	ads 0 0 0 0 11 11 11 11 11 11 11 11 11 11 1	ECO4 TOTAL:	52,920				\$21.96	\$21.96	\$254.59
it	ads 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	sads 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	5	0			0	\$0.00	\$0.00	\$0.00
: 0 0 0 0 \$0.00 \$0.00 14	o 0 0 0 0 0 0 0 CORP	o 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Snower neads							
t 0 0 0 \$0.00	0 0 0	0 0	ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
00.00\$ \$0.00	0 0 0	0 0 0	9							
00.0\$ 00.00 0 0	0 0	0 0	Equipment							
00.0\$ 00.00 0 0	0 0	0 0 0	Related							
00.0\$ 0.00 0 0 0	0 0	0 0							The second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a section in the second section in the section is a section in the section in the section is a section in the section in the section is a section in the section in the section is a section in the section in the section in the section is a section in the section in the section in the section is a section in the section in the section in the section in the section is a section in the section in	
			ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

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Pac. Fac.		FY94S EEAP FT, KI	FY94S EEAP FT. KNOX WAT & CONSERVATION STUDY	ION ST	Yar		10
Existing Fixture System		CALCULA	ATION WORK SHEET 1			DATE:	31 Oct 94
Compacting Hours: Retrofited Fixture System Compacting Hourse	FACILITY NO. :	6571	FUNCTION:	Ad	min. Fac		
Existing Fixture System Retrofited Fixture System Usage Fixtures	Occupancy:		Operating Hours:		8		
Description LPM Description LPM HRSYYR Quantity	ECO Number				$\overline{}$	Fixtures	Water Leaks
Public Lavatory 9.5 Spring Loaded Faucets 4.7 130 3	ECO Type			PM		Quantity	Eliminated LPY
LPM	1		Spring Loaded Faucets	1—		က	
LPM	Lavatory Sinks						
Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 2200 3 Floor Mounted Flush Valve 17 Install 1.0 GPF Flush Valve 3.79 5460 4 Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 5460 4 ILPM Repair Kit CONTROLLEM HRS/YR 4 ILPM HRS/YR 4 ILPM CONTROLLEM CONTROL	ECO1 TOTAL:	.12		I PM		8	C
LPF	2	1_					
Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 2200 3	Misc. Sinks						
Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 2200 3							
Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 2200 3	ECO2 TOTAL:			A5 ***	FLYR	0	0
Sepair Kit Control C	3			 _	2200	3	
LPF	Water Closets		Repair Kit				
Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 5460 4	ECO3 TOTAL .				2 Q X - 1	ç	
Wall Mounted Flush Valve 3.79 5460 4 4 4 4 4 4 4 4 4	ECOS IOIAE.					2	0
ds : Control of the	4 Irinals		Install		5460	4	
ds LPM LPM CONTRACTOR							
ds the state of t	ECO4 TOTAL:			LPMH	RS/YR	4	0
t t	2						
t Construction of the Cons	Shower Heads						
	FCOS TOTAL .				はないのはないのできる	c	
	9		A CAMPAGE TO THE CAMP				
	Equipment						
	Related						
Market of the control	FCO6 TOTAL					c	C
				and the second of the second o	* * * * * * * * * * * * * * * * * * *	,	

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		C	LCULAT	ION WO	CALCULATION WORK SHEET 2	CULATION WORK SHEET 2	1
FACILITY NO. :	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
768	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ECO Number	Annual Water	Annual	Annual Energy S	Saving	WATER	Total	Total
ECO Type	Saving LPY	ELEC	ELEC	GAS MWH	Dollar Saving	Dollar Saving	Dollars Invested
	\equiv			0	\$58.02	\$61.38	\$734.40
Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
ECO1 TOTAL:	139,815	0	0	0	\$58.02	\$61.38	\$734.40
2	0			0	\$0.00	\$0.00	\$0.00
Misc. Sinks							
ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
က	25,080				\$10.41	\$10.41	\$180.14
Water Closets							
ECO3 TOTAL:	25,080				\$10.41	\$10.41	\$180.14
4	41,278				\$17.13	\$17.13	\$254.59
Urinals							
ECO4 TOTAL:	41,278				\$17.13	\$17.13	\$254.59
5	0			0	\$0.00	\$0.00	\$0.00
Shower Heads							
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
9							
Equipment							
Related				-			
ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

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PACILITY NO.		FY94S EEAP FT	KNO.	F. KNOX WAT & CONSERVATION STUDY	S NO	TUDY		30 -
Existing Fixture System Retrofited Fixture System LPM Description LPM Description LPM Description LPM RS/rR Quantity Dublic Lavatory 27 Spring Loaded Faucets 4.7 130 3 3		CALC	ULATI	ON WORK SHEET 1			DATE:	31 Oct 94
Existing Fixture System Retrofited Fixture System Description LPM Description LPM HRS/YR Quantity	FACILITY NO. :	6574		FUNCTION:	'	NBC Defe	nce	
Existing Fixture System	Occupancy:	20		Operating Hours:	·	æ		
Description LPM Description LPM HRS/YR Quantity	ECO Number	-		Retrofited Fixture Syster	٤	Usage	Fixtures	Water Leaks
Public Lavatory 27 Spring Loaded Faucets 4.7 130 3	ECO Type		LPM	Description	LPM	HRS/YR	Quantity	Eliminated LPY
LPM		Public Lavatory	27	Spring Loaded Faucets	4.7	130	3	15800
LPM	Lavatory Sinks							
Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 1500 12	ECO1 TOTAL:	90 84 10 10 10 10	LPM		LPM			15800
Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 1500 12	2							
Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 1500 12	Misc. Sinks							
Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 1500 12								
Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 1500 12	ECO2 TOTAL:	4.5	LPF		TbE	#FL/YR		0
LPF #FL/YR 12	3	Floor Mounted Flush Valve	17		13.2	1500	12	-
Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 9000 8 Repair Kit LPM HRS/YR 8 LPM LPM LPM 0	Water Closets			Repair Kit				
Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 9000 8 Repair Kit LPM HRS/YR 8 LPM LPM HRS/YR 0								
Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 9000 8	EC03 TOTAL:		LPF	いっぱん (の)	LPF	#FL/YR		0
CEPM	4		5.68	1.0 GPF Flush	3.79	0006	8	
Company Comp	Urinals			Repair Kit				
Color								
35	ECO4 TOTAL:		LPM		LPM	HRS/YR		0
15	5							
: The control of the	Shower Heads							
	FCOS TOTAL .		MG		Md		c	C
	9							
	Equipment							
	Related							
	ECO6 TOTAL:				140 N	A STATE OF THE STA	0	0
							,	

Systems Engineering and Management Corporation, Knoxville, TN

	FY9	AS FFA	D FT K	W XON	EV94S FEAP ET KNOX WA ER CONSERVATION STIINY	VATION STILL	2 OE 2
		Z)	ALCULAT	ION WO	CALCULATION WORK SHEET 2		
FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
<u></u>	Gas Rate:	10.51	\$/MWH		Demand Rate:	-	\$/KW
ECO Number	Annual Water	Annua	Energy	Saving	WATER	Total	Total
ECO Type	Saving LPY	ELEC KW	ELEC KWH	GAS MWH	Dollar Saving	Dollar Saving	Dollars Invested
1	11			_	\$234.52	\$248.10	\$734.40
Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
ECO1 TOTAL:	565,115	0	0	1	\$234.52	\$248.10	\$734.40
2	0			0	\$0.00	\$0.00	\$0.00
Misc. Sinks							
ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
3	68,400				\$28.39	\$28.39	\$720.58
Water Closets							
ECO3 TOTAL:	68,400				\$28.39	\$28.39	\$720.58
4	136,080				\$56.47	\$56.47	\$509.18
Urinals							
ECO4 TOTAL:	136,080				\$56.47	\$56.47	\$509.18
သ	0			0	\$0.00	\$0.00	\$0.00
Shower Heads							
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
9							
Equipment	1						
Related	-						
ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

FACILITY NO. 6581 FUNCTION: Admin Facility		FY94S EEAP FT	T. KN	. KNOX WAT CONSERVATION STUDY	SNOL	TUDY		10
Existing Fixture System Petrofited Fixture System Usage Fixtures Description LPM HRS/TR Quantity		CAL	CULAT	ION WORK SHEET 1			DATE:	
Comparing Hours: 14	FACILITY NO. :	6581		FUNCTION:		Admin Fac	illity	
Existing Fixture System Retrofited Fixture System Usage Fixtures	Occupancy:	300		Operating Hours:		14		
Description LPM Description LPM HRSYYR Quantity	ECO Number	Existing Fixture Systen		Retrofited Fixture Syste	m	Usage	Fixtures	Water Leaks
Public Lavatory 9.5 Spring Loaded Faucets 4.7 130 30	ECO Type	Description	LPM	Description		HRS/YR	Quantity	Eliminated LPY
Complete the control of the contro	_	Public Lavatory	9.5	Spring Loaded Faucets	4.7	130	30	
LPM	Lavatory Sinks	Public Lavatory	17	Spring Loaded Faucets	4.7	130	16	
Laundry Sink 19 Install Aerators 9.5 130 8	ECO1 TOTAL:		LPM		LPM		46	0
Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 2340 34	2	Laundry Sink	19	Install Aerators	9.5	130	8	
Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 2340 34	Misc. Sinks							
Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 2340 34	ECO2 TOTAL:		LPF		LPF	#FL/YR	8	0
LPF	က	Floor Mounted Flush Valve	17		13.2	2340	34	
LPF	Water Closets			Repair Kit				
LPF #FLYR 34 Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 7020 24 Repair Kit LPM Repair Kit 24 S LPM HRS/YR 24 S LPM O O								
Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 7020 24	ECO3 TOTAL:		LPF		LPF	#FL/YR	34	0
1. LPM HRS/Y.R. 24 1. LPM	4	Wall Mounted Flush Valve	5.68	1.0 GPF	3.79	7020	24	
1	Urinals			Repair Kit				
ads it it it it it it it it it i								
S C C C C C C C C C C C C C C C C C C C	ECO4 TOTAL:		LPM		LPM	HRS/YR	24	0
	9							
	Shower Heads							
	FCOS TOTAL	And the second s	- DM		1 DAA			
	9		i i		Ē I			
	Equipment							
	Related							
	- - - - - - - - -							
	ECO6 IOIAL:					그 바이를 살해.	0	0

Systems Engineering and Management Corporation, Knoxville, TN

	FY9	FY94S EEAP	P FT. K	M XON	R CONSER	FT. KNOX WA ER CONSERVATION STUDY	2 OF 2
		CAI	ALCULAT	ION WO	CULATION WORK SHEET 2		
FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
0	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ECO Number	Annual Water	Annua	Annual Energy 8	Saving	WATER	Total	Total
ECO Type	Saving LPY	ELEC KW	ELEC	GAS MWH	Dollar Saving	Dollar Saving	Dollars Invested
-	12			3	\$580.23	\$613.82	\$7,344.00
Lavatory Sinks	1,681,680			4	\$697.90	\$738.30	\$3,916.80
ECO1 TOTAL:	3,079,830	0	0	7	\$1,278.13	\$1,352.12	\$11,260.80
2	592,800			_	\$2.46	\$2.60	\$77.57
Misc. Sinks				-			
ECO2 TOTAL:	592,800	0	0	-	\$2.46	\$2.60	\$77.57
3	302,328				\$125.47	\$125.47	\$2,041.63
Water Closets							
ECOS TOTAL .	202 220				640E 47	6405 47	62 644 62
ECC3 101AE.	318 427				\$132.46	\$130.41 \$130.15	\$4,041.05 \$1,527.55
Urinals) 10 10 10 10 10 10 10 10 10 10 10 10 10		00.
ECO4 TOTAL:	318,427				\$132.15	\$132.15	\$1,527.55
5	0			0	\$0.00	\$0.00	\$0.00
Shower Heads							
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
9							
Equipment							
Kelated							
			d		() () () () () () () () () ()		000
ECO6 IOIAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

	FY94S EEAP FT	KN	FY94S EEAP FT. KNOX WAT CONSERVATION STUDY	NOI	TUDY		10
	CALC	ULAT	CALCULATION WORK SHEET 1			DATE:	31 Oct 94
FACILITY NO. :	6590		FUNCTION:		Troop Processing	cessing	
Occupancy:	50 (and 400 Troops)		Operating Hours:	·	80		
ECO Number	e System		Retrofited Fixture System	E C	Usage	Fixtures	Water Leaks
ECO Type	Public Lavatory	0.5	Spring Loaded Faugets	47	130 130	-duanuty	Eliminated LF1
Lavatory Sinks	Public Lavatory	15	Spring Loaded Faucets	4.7	130	- 6	
ECO1 TOTAL:		LPM		LPM	Section 1	10	0
2							
Misc. Sinks							
ECO2 TOTAL:		LPF		LPF	#FL/YR	0	0
က	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	0009	10	
Water Closets			Repair Kit				
TATOT COOL		7		1			c
ECO3 IOIAL:		171		LPF	#FL/YR	10	0
4	Wall Mounted Flush Valve	5.68	Install 1.0 GPF Flush Valve	3.79	11700	4	
Urinals			Repair Kit				
ECO4 TOTAL:		LPM	では、一般の一般の一般の一般の一般の一般の一般の一般の一般の一般の一般の一般の一般の一	LPM	HRS/YR	4	0
5							
Shower Heads							
- LATOT TOTAL	- 一	1 DAM		710			
ECO3 101AL .				N L	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	>	
0							
Equipment							
Related							
ECO6 TOTAL:				- 7 5/8 7 (2) 1		0	0

Systems Engineering and Management Corporation, Knoxville, TN

	FY9	FY94S EEAP FT. KNOX WA	P FT. K	NOX W		ER CONSERVATION STUDY	2 OF 2
		CA	ALCULAT	IOM NOI			
FACILITY NO.: 6590	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
	Gas Rate:	10.51	#WW/\$		Demand Rate:		\$/KW
ECO Number	Annual Water	Annual	Energy 5	Saving	WATER	Total	Total
ECO Type	Saving LPY	ELEC	ELEC	GAS	Dollar Saving	Dollar Saving	Dollars Invested
1	05			0	\$19.34	\$20.46	\$244.80
Lavatory Sinks	805,545			2	\$334.30	\$353.65	\$2,203.20
ECO1 TOTAL:	852,150	0	0	2	\$353.64	\$374.11	\$2,448.00
2	0			0	\$0.00	\$0.00	\$0.00
Misc. Sinks							
ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
3	228,000				\$94.62	\$94.62	\$600.48
Water Closets							
ECO3 TOTAL:	228,000				\$94.62	\$94.62	\$600.48
4	88,452				\$36.71	\$36.71	\$254.59
Urinals							
ECO4 TOTAL:	88,452				\$36.71	\$36.71	\$254.59
5	0			0	\$0.00	\$0.00	\$0.00
Shower Heads							
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
9							
Equipment							
Related							
ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

	FY94S EEAP FT. KNOX WA	r. KNO	X WALER CONSERVATION STUDY	S NO	TUDY		1002
	CALC	SULATIC				DATE:	29 Oct 94
FACILITY NO.:	6592		FUNCTION:		Maintenance	e 5	
Occupancy:			Operating Hours:	1	80		
ECO Number ECO Type	Existing Fixture System Description	LPM	Retrofited Fixture System Description	m LPM	Usage HRS/YR	Fixtures Quantity	Water Leaks Eliminated LPY
1 Lavatory Sinks							
ECO1 TOTAL:		LPM		LPM		0	0
2 Misc. Sinks							0
ECO2 TOTAL:		LPF		LPF	#FL/YR	0	0
3 Water Closets	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve Repair Kit	13.2	3000	2	
ECO3 TOTAL:		LPF	一一 一 一 一 一 一 一 一 一 一 一 一 一 一 一 一 一 一 一	LPF	#FL/YR	2	0
4 Urinals	Wall Mounted Flush Valve	5.68	Install 1.0 GPF Flush Valve Repair Kit	3.79	18250	-	
ECO4 TOTAL:	(表現の) (1967年) (1967年	LPM		LPM	HRS/YR	-	0 0
Shower Heads							
ECO5 TOTAL:		LPM		LPM		0	0
6 Equipment Related							
ECO6 TOTAL:						0	0
SYSTEMS CORP	ORP	System	Systems Engineering and Management Corporation,	ment C	orporation	1	Knoxville, TN

Systems Engineering and Management Corporation, Knoxville, TN

	EVOVE	V 11 11	0 ET 7	DET VAIOV W/		VOLITO MOLTAN	1
			LCULAT	OM NOI	8 I X	SHEET 2	2012
FACILITY NO. :	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
7699	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ECO Number	Annual Water	Annual	Energy 8	Saving	WATER	Total	Total
ECO Type	Saving LPY	ELEC KW		GAS MWH	Dollar Saving	Dollar Saving	Dollars Invested
_	0			0	\$0.00	\$0.00	\$0.00
Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO1 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
2	0			0	\$0.00	\$0.00	\$0.00
Misc. Sinks	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
3	22,800				\$9.46	\$9.46	\$120.10
Water Closets	0				\$0.00	\$0.00	\$0.00
	0				\$0.00	\$0.00	\$0.00
ECO3 TOTAL:	22,800				\$9.46	\$9.46	\$120.10
4	34,493				\$14.31	\$14.31	\$63.65
Urinals	0			,	\$0.00	\$0.00	\$0.00
	0				\$0.00	\$0.00	\$0.00
ECO4 TOTAL:	34,493				\$14.31	\$14.31	\$63.65
5	0			0	\$0.00	\$0.00	\$0.00
Shower Heads	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
9	0			0	\$0.00	\$0.00	\$0.00
Equipment	0			0	\$0.00	\$0.00	\$0.00
Related	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

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	LISAS EEAP FI. NNOA WA	2	OA WALER CONSERVATION STUDY		1001		7
	CAL	CULAT	CALCULATION WORK SHEET 1			DATE:	31 Oct 94
FACILITY NO. :	6597		FUNCTION:	·	Officers Quarters	uarters	
Occupancy:	370		Operating Hours:	·	ransient 24		
ECO Number	Existing Fixture System		Retrofited Fixture System	E	Usage	Fixtures	Water Leaks
ECO Type	Description	LPM	1	LPM	HRS/YR	Quantity	Eliminated LPY
-	Public Lavatory	9.5	Spring Loaded Faucets	4.7	130	2	
Lavatory Sinks	Private Lavatory	9.5	Spring Loaded Faucets	4.7	280	78	
ECO1 TOTAL .		I DM		1 DM		Ud	
2]				3	
Misc. Sinks							
ECO2 TOTAL:		LPF		LPF	#FL/YR	0	0
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	0006	82	
Water Closets			Repair Kit				
ECO3 TOTAL:		LPF		LPF	#FL/YR	82	0
4							
Urinals							
TATOT ACOT		2					
ECO4 101AL:		L E		LPM	HKS/YR	0	0
Shower Heads							
ECO5 TOTAL:	(1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	LPM	(1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	LPM		0	0
9							
Equipment							
Related							
ECO6 TOTAL:	(1) (1) (1) (1) (1) (1) (1) (1) (1) (1)					0	0
SYSTEMS CORP	ORP	Sveter	Systems Engineering and Management Corporation	nont C	orporation	ı	Knovville TN
)	;	, ,	ווא בוואנוויספוווא מווא וזומוואאיז) = 0=	טוים וטקוס		ב', <u>ב</u>

Systems Engineering and Management Corporation, Knoxville, TN

%/KWH		FY9	FY94S EEAP	P FT. KI	W XON	ER CONSER	FT. KNOX WALER CONSERVATION STUDY	2 OF 2
Water Rate:			73		IOM MOI	RK SHEET 2		
Gas Rate: 10.51 \$\text{MWM}\$ Demand Rate: \$\text{FLMMM}\$ \$\text{FLMMM}\$ \$\text{FLMMM}\$ \$\text{FLMMM}\$ \$\text{FLMMM}\$ \$\text{Total}\$ \$\text{SMS}\$ \$\text{SMMM}\$ \$\text{MMM}\$ \$\text{Dollar Saving}\$ \$\text{MMM}\$ \$\text{Dollar Saving}\$ \$\text{SMS}\$	FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:	\$	у,кмн
Saving LPY KWH MWH Dollar Saving		Gas Rate:	10.51	\$/MWH		Demand Rate:	\$	%/KW
ks FLEC Saving LPY RWH RWH Saving S3,210 ELEC SAS GAS S8.68 S40.92 ks 7,829,640 18 \$3,249.30 \$40.92 c 7,922,850 0 18 \$3,249.30 \$3,478.32 c 0 0 0 \$50.00 \$0.00 c 0 0 0 \$0.00 \$0.00 c 2,804,400 0 0 \$1,163.83 \$1,163.83 c 0 0 \$1,163.83 \$1,163.83 \$1,163.83 c 0 \$1,163.83 \$1,163.83 \$1,163.83 \$1,163.83 c 0 \$0 \$0.00 \$0.00 \$0.00 \$0.00 ds 0 0 \$0.00 \$0.00 \$0.00 \$0.00 t 0 0 \$0.00 \$0.00 \$0.00 \$0.00 t 0 0 \$0.00 \$0.00 \$0.00 \$0.00	ECO Number	Annual Water	Annual	Energy	Saving	WATER	Total	Total
ks 7,829,640 0 \$38.68 \$40.92 7,822,850 0 0 18 \$3,249.30 \$3,437.40 s 0 0 18 \$3,287.98 \$3,478.32 s 0 0 0 \$0.00 \$0.00 s 0 0 \$0.00 \$0.00 ts 2,804,400 \$1,163.83 \$1,163.83 \$1,163.83 ts 0 \$0.00 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 tr 0 \$0.00 \$0.00 ds \$0.00 \$0.00 ds \$0.00 \$0.00 tr \$0.00 \$0.00	ECO Type		ELEC	ELEC KWH	GAS	Dollar Saving	Dollar Saving	Dollars Invested
ks 7,829,640 18 \$3,249.30 \$3,478.32 7,922,850 0 18 \$3,287.98 \$3,478.32 s 0 \$0.00 \$0.00 \$0.00 s 0 0 \$0.00 \$0.00 ts 2,804,400 \$1,163.83 \$1,163.83 ts \$0 \$0.00 \$0.00 ds \$0.00 \$0.00 \$0.00 ds \$0.00 \$0.00 \$0.00 t \$0.00 \$0.00 \$0.00 t \$0.00 \$0.00 \$0.00 t \$0.00 \$0.00 \$0.00 t \$0.00 \$0.00 \$0.00		93,210			0	\$38.68	\$40.92	\$489.60
7,922,850 0 0 48 \$3,287.98 \$3,478.32 5 0 0 \$0.00 \$0.00 \$0.00 5 0 0 \$0.00 \$0.00 4s 2,804,400 \$1,163.83 \$1,163.83 \$1,163.83 6 0 \$1,163.83 \$1,163.83 \$1,163.83 6 0 \$0.00 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 \$0.00 t 0 \$0.00 \$0.00 \$0.00 t 0 \$0.00 \$0.00 \$0.00 t 0 \$0.00 \$0.00 \$0.00	Lavatory Sinks	7,829,640			18	\$3,249.30	\$3,437.40	\$19,094.40
\$\begin{array}{c ccccccccccccccccccccccccccccccccccc	ECO1 TOTAL:	7,922,850	0	0	18	\$3,287.98	\$3,478.32	\$19,584.00
\$ 5.000	2	0			0	\$0.00	\$0.00	\$0.00
ts 2,804,400	Misc. Sinks							
ts 2,804,400	ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
ts 2,804,400 \$1,163.83 \$1,163.83 \$1,163.83 \$1,000 \$0.0	3	2,804,400				\$1,163.83	\$1,163.83	\$4,923.94
2,804,400 \$1,163.83 \$1,163.83 0 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 t 0 0 \$0.00 t 0 0 \$0.00 t 0 \$0.00 \$0.00	Water Closets							
0 \$0.00 \$0.00 \$0.00 \$0.00	ECO3 TOTAL:	2,804,400				\$1,163.83	\$1,163.83	\$4,923.94
ds	4	0				\$0.00	\$0.00	\$0.00
ds 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Urinals							
ds	ECO4 TOTAL:	0				\$0.00	\$0.00	\$0.00
t	2	0			0	\$0.00	\$0.00	\$0.00
t \$0.00 \$0.00 \$0.00 t	Shower Heads		and public the state of the sta					
t 0 0 0 \$0.00	ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
t 0 0 0 \$0.00	9							
00.0\$ 00.0\$ 0 0 0	Equipment							
00.0\$ 0.00 0 0 0	Related							
00.0\$ 00.00 0 0 0								
	ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

PACILITY NO.: 6607 PUNCTION: Gym Operating Hours: Morning PT	CALCULATION WORK SHEET 1 CALCULATION WORK SHEET 1 Operating PI Operating		FY94S FEAP FT	KNOX	WAT	SNO	TIIDY		16
Description LPM Description LPM HRS/YR Quantity Description LPM Description LPM Description LPM Description LPM Description LPM Description LPM HRS/YR Quantity Description LPM HRS/YR Quantity Description LPM HRS/YR Quantity Description LPM HRS/YR Quantity Description LPM HRS/YR Description Description LPM HRS/YR Description	Description LPM Description LPM HRS/RR		CALCU	LATIO	N WORK SHEET 1			DATE:	31 Oct 94
Paristing Fixture System Retrofited Fixture System Description LPM Description LPM Description LPM Description LPM Retrofited Fixture System LPM Reserve LPM Res	Page	FACILITY NO. :	2099		FUNCTION:		Gym	ı	
Existing Fixture System Retrofited Fixture System Usage Fixtures	Existing Fixture System Retrofited Fixture System Usage	Occupancy:			Operating Hours:	۷'	Aorning P	 .	
Description LPM Description LPM HRS/YR Quantity	Description LPM Description LPM HRS/YR	ECO Number			Retrofited Fixture Syster	ш	Usage	Fixtures	Water Leaks
Public Lavatory 15 Spring Loaded Faucets 4.7 65 6	Public Lavatory 15 Spring Loaded Faucets 4.7 65	ECO Type		PM	Description	LPM	HRS/YR	Quantity	Eliminated LPY
LPM	LPM	_		15	Spring Loaded Faucets	4.7	65	9	
Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 1300 6	LPM	Lavatory Sinks							
Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 1300 6	LPF	ECO1 TOTAL:		PM		LPM	Signal Si	9	0
Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 1300 6	Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 1300	2							
Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 1300 6	Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 1300	Misc. Sinks							
Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 1300 6	Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 1300								
Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 1300 6	Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 1300	ECO2 TOTAL:		.PF		LPF	#FL/YR		0
S Repair Kit LPF #ELYR® 6 Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 1300 6 S Repair Kit C C C C C S C C C C C C C S C C C C C C C C C S C<	Comparison	3			nstall 3.5 GPF Flush Valve	13.2	1300	9	
Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 1300 6 Repair Kit LPM: HRS/YR 6	Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 1300 Repair Kit LPM HRS/YR LPM LLPM LPM HRS/YR	Water Closets			Repair Kit				
Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 1300 6 S LPM HRS/YR 6 S LPM 0	Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 1300 LPM Repair Kit LPM HRS/YR S LPM LPM HRS/YR	ECOS TOTAL.) DC	· · · · · · · · · · · · · · · · · · ·	ם			
Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 1300 6	Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 1300 Repair Kit State of the Park HRS/YR LPM HRS	ECOS IOIAL.	4		5. 2.50 一种经济通知等于"国家的"。	וב	#FL/TR		>
ds i. The pair No. 1990 of th	ds LPM HRS/YR	4		+		3.79	1300	9	
ds the contraction of the contr	ds the state of t	Ormais			Repair Nit				
in the control of the		ECO4 TOTAL:		PM		LPM	HRS/YR		0
		5		-				_	
TO THE PROPERTY OF THE PROPERT		Shower Heads							
		ECOR TOTAL .		DM		- Mai	(京新) (宋新帝王) (宋	,	
		6					X 327 007 1 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
		Eauipment							
		Related							
	《《···································								
		ECO6 TOTAL:	教育のないできない かんしん あいき かんしん かんしん				18 W. S. S. S. S.	0	0

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	FY9	FY94S EEAP FT. KNOX WA	P FT. K	NOX W		R CONSERVATION STUDY	2 OF 2
		75	LCULAT	ION WOI	뇌		
FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
)))	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ECO Number	Annual Water	Annua	Energy	Saving	WATER	Total	Total
ECO Type	Saving LPY	ELEC KW	ELEC KWH	GAS MWH	Dollar Saving	Dollar Saving	Dollars invested
7	268,515			-	\$111.43	\$117.88	\$1,468.80
Lavatory Sinks							
ECO1 TOTAL:	268,515	0	0	1	\$111.43	\$117.88	\$1,468.80
2	0			0	\$0.00	\$0.00	\$0.00
Misc. Sinks							
ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
3	29,640				\$12.30	\$12.30	\$360.29
Water Closets							
ECO3 TOTAL:	29.640				\$12.30	\$12.30	\$360.29
4	14,742				\$6.12	\$6.12	\$381.89
Urinals							
ECO4 TOTAL:	14,742				\$6.12	\$6.12	\$381.89
2	0			0	\$0.00	\$0.00	\$0.00
Shower Heads							
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
9							
Equipment							
Related				T			
ECOS TOTAL .		C	c	c	Ç Ç	000	G G
ECO IOIAL:		0		>	\$0.00	\$0.00	\$0.00
SYSTEMS CORP	ORP			Systems	Engineering and	Systems Engineering and Management Corporation,	poration, Knoxville, TN

	EVOAS EEAD E		VALUE OF TAXABLE AND VALUE OF TAXABLE OF TAX				
	LISAS EEAF FI	• 1	ON WAREN CONSERVAL	ON ON ON ON ON ON ON ON ON ON ON ON ON O	IUDY		7
	CALC	SULAT	ULATION WORK SHEET 1			DATE:	31 Oct 94
FACILITY NO.:	6611		FUNCTION:	,	Clothing & Sales	Sales	
Occupancy:	4		Operating Hours:	·	æ		
ECO Number	Existing Fixture System	. 1	Retrofited Fixture System	L L	Usage	Fixtures	Water Leaks
ECO Type	Description	LPM	Description	LPM	HRS/YR	Quantity	Eliminated LPY
	Public Lavatory	9.5	Spring Loaded Faucets	4.7	130	4	
Lavatory Sinks							
ECO1 TOTAL:		LPM		LPM		4	0
2							
Misc. Sinks							
ECO2 TOTAL:		LPF		LPF	#FL/YR	0	0
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	1300	3	
Water Closets			Repair Kit				
ECO3 TOTAL:		I PF		E DE	#FI WR	٣	
4	Wall Mounted Flush Valve	5.68	Install 1.0 GPF Flush Valve	3.79	1300		>
Urinals							
ECO4 TOTAL:	Address of the Control of the Contro	LPM		LPM	HRS/YR	1	0
2							
Snower Heads							
ECO5 TOTAL:		LPM		LPM		0	0
9							
Equipment							
Related							
ECO6 TOTAL				1.5	を 動い に に に に に に に に に に に に に	c	c
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	FY9	AS FFA	P FT K	W XON	EP CONSED	EV94S FEAP ET KNOX W ER CONSERVATION STILLON	2052
		C/	1LCULAT	ION WO	CALCULATION WORK SHEET 2		7 10 7
FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		#WMH
-	Gas Rate:	10.51	\$/MWH		Demand Rate:	0)	\$/KW
ECO Number	Annual Water	Annua		Saving	WATER	Total	Total
ECO Type	Saving LPY	ELEC KW	ELEC	GAS MWH	Dollar Saving	Dollar Saving	Dollars Invested
_	186,420		1	0	\$77.36	\$81.84	\$979.20
Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
ECO1 TOTAL:	186,420	0	0	0	\$77.36	\$81.84	\$979.20
2 Misc. Sinks	0			0	\$0.00	\$0.00	\$0.00
ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
3 Water Closets	14,820				\$6.15	\$6.15	\$180.14
ECO3 TOTAL:	14,820				\$6.15	\$6.15	\$180.14
4	2,457				\$1.02	\$1.02	\$63.65
Orinais							
ECO4 TOTAL:	2,457				\$1.02	\$1.02	\$63.65
5 Shower Heads	0			0	\$0.00	\$0.00	\$0.00
						77477	
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
6							
Related							The state of the s
ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

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Common North Street 1		TO GEAD ET	T KN	V WAT		\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\		4
CALCULATION WORK SHEET 1 DATE: CALCULATION WORK SHEET 1 FUNCTION: Training Building		T 1940 LT		ON WAINER CONSERVAL		1001		3
Existing Fixture System Retrofited Fixture System LPM HRS/TR Quantity		CAL	CULAT	ION WORK SHEET 1			DATE:	31 Oct 94
Existing Fixture System Retrofited Fixture System Usage Fixtures Description LPM Description LPM RRSYR Quantity	FACILITY NO.:	6616		FUNCTION:	'	Training B	nilding	
Existing Fixture System Retrofited Fixture System Usage Fixtures	Occupancy:	9		Operating Hours:	'	11		
Description LPM Description LPM HRS/YR Quantity	ECO Number	Existing Fixture System		Retrofited Fixture Syster	m	Usage	Fixtures	Water Leaks
Public Lavatory 9.5 Spring Loaded Faucets 4.7 130 1 Character	ECO Type	Description		Description	LPM	HRS/YR	Quantity	Eliminated LPY
LPM	1	Public Lavatory	9.2	Spring Loaded Faucets	4.7	130	7	15800
LPK	Lavatory Sinks							
Tank Type (public)	ECO1 TOTAL:		LPM		LPM			15800
LPF	2							
LPF	Misc. Sinks							
Tank Type (public)								
ts Tank Type (public) 11.4 Install 1.6 GPF Tank Type 6 2100 1 Water Closet	ECO2 TOTAL:		LPF		LPF	#FL/YR		0
ts	3	Tank Type (public)	11.4	1.6 GPF Tank	9	2100	-	
LPF	Water Closets							
. Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 8000 1 Repair Kit	FCOS TOTAL		ם		-	70/2		C
Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 8000 1 LPM Repair Kit 1 LPM HRS/YR: 1 LPM LPM	ECO3 IOIAL:		7		171	#FLYK		0
Compare Kit Compare Kit	4	Wall Mounted Flush Valve	5.68	- 1	3.79	8000	-	
S	Urinals			Repair Kit				
S S S S S S S S S S S S S S S S S S S								
	ECO4 TOTAL:		LPM		LPM	HRS/YR		0
	5							
0	Shower Heads							
	ECO5 TOTAL:		LPM		LPM		0	0
	9							
	Equipment							
	Related							
	TOT SO T				17 414			
	ECUS IOIAL:							0

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FACILITY NO. Water Rate: 0.42 \$KL Energy Rate: 65616 Gas Rate: 0.42 \$KL Energy Rate: 65616 Gas Rate: 10.51 \$KMVH Energy Rate: 5KKWH ELEC Mumber Annual Energy Rate: 5KWH ELEC GAS Gas Rate: 62,405 Gas Rate: 62,605 Gas Rate: 62,6		ΕΥ9	4S FFA	P FT K	W XON	SE CONSER	VATION STIDY	2 OF 2
Water Rate: 0.42 \$/K/L Energy Rate: \$/K/L Gas Rate: 10.51 \$/MWH Demand Rate: \$/K/L Annual Water Caving C2,405 Annual Energy Saving C4.05 WATER C4.05 Total C4.05 Saving LPY KW KWH C62,405 0 0 \$2.5.90 \$2.7.40 Saving LPY KW KWH C62,405 0 0 \$0.00 \$0.00 62,405 0 0 \$0.00 \$0.00 62,405 0 0 \$0.00 \$0.00 11,340 0 \$0.00 \$0.00 \$0.00 11,340 0 \$0.00 \$0.00 \$0.00 11,340 0 \$0.00 \$0.00 \$0.00 15,120 0 \$0.00 \$0.00 \$0.00 15,120 0 \$0.00 \$0.00 \$0.00 0 0 \$0.00 \$0.00 \$0.00 0 0 \$0.00 \$0.00 \$0.00 0 0 \$0.00 \$0.00 \$0.00 <			C	LCULAT	IOM NOI	RK SHEET 2		1
Gas Rate: 10.51 \$\text{MWH}\$ Demand Rate: \$\text{KW}\$ \$\text{MWH}\$	FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:	€	/КМН
Annual Water Annual Energy Saving WATER Total Saving LPY KW KWH MWH Dollar Saving Dollar Saving 62,405 0 0 \$25.90 \$27.40 s 0 0 \$0.00 \$0.00 s 0 0 \$0.00 \$0.00 s 0 0 \$0.00 \$0.00 ts 11,340 \$4.71 \$4.71 ts 11,340 \$6.27 \$6.27 ds 0 \$6.00 \$0.00 ds 0 \$6.00 \$0.00 tr 0 0 \$6.00 \$0.00)	Gas Rate:	10.51	\$/MWH		Demand Rate:	€	/KW
ks ELEC ELEC GAS (GAS) GOIlar Saving Saving (GZ,405) ELEC ELEC GAS (GAS) COIlar Saving S27.40 COIlar Saving S27.40 ST. 40	ECO Number	Annual Water	Annual	Energy	Saving	WATER	Total	Total
ks 62,405 0 \$25.90 \$27.40 c 0 \$0.00 \$0.00 \$0.00 s 0 0 \$27.40 c 0 0 \$25.90 \$27.40 s 0 0 \$0.00 \$0.00 s 0 0 \$0.00 \$0.00 t 11,340 \$4.71 \$4.71 \$4.71 ts 11,340 \$6.27 \$6.27 \$6.27 t 0 0 \$6.27 \$6.27 ds 0 0 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 \$0.00 t \$0.00 \$0.00 \$0.00 \$0.00 t \$0.00 \$0.00 \$0.00	ECO Type		ELEC	ELEC	GAS	Dollar Saving	Dollar Saving	Dollars invested
ks 0 \$0.00 \$0.00 62,405 0 0 \$25.90 \$27.40 s 0 0 \$0.00 \$0.00 s 0 0 \$0.00 \$0.00 ts 11,340 \$4.71 \$4.71 ts 11,340 \$6.27 \$6.27 ts 0 0 \$0.00 ds 0 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 t \$0.00 \$0.00 \$0.00 t \$0.00 \$0.00 \$0.00		ဗြ			0	\$25.90	\$27.40	\$244.80
62,405 0 0 0 \$25.90 \$27.40 s 0 0 0 \$0.00 \$0.00 11,340 0 0 0 \$4.71 \$4.71 11,340 84.71 \$4.71 15,120 \$6.27 \$6.27 0 0 0 0 \$50.00 \$0.00 t t t 0 0 0 0 \$50.00 \$50.00 0 0 0 \$50.00 \$50.00 0 0 0 0 \$50.00 \$50.00 0 0 0 0 \$50.00 \$50.00	Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
s 0 0 0 0 50.00 \$0	FCO1 TOTAL	62 405	c	c	c	\$25 QA	\$27 AN	\$244 BO
ts	2	0	,	,	0	\$0.00	00 08	00 08
ts	Misc. Sinks							
ts	ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
ts 11,340	3	11.340				\$4.71	\$4.71	\$419.16
11,340 \$4.71 \$4.71 \$4.71 \$4.71 \$4.71 \$6.27 \$6.27 \$6.27 \$6.27 \$6.27 \$6.27 \$6.27 \$6.27 \$6.27 \$6.27 \$6.27 \$6.27 \$6.27 \$6.27 \$6.27 \$6.27 \$6.00 <t< td=""><td>Water Closets</td><td></td><td></td><td></td><td></td><td>-</td><td>-</td><td>-</td></t<>	Water Closets					-	-	-
15,120 \$6.27 \$6.27 15,120 \$6.27 \$6.27 15,120 0 \$0.00 ds 0 0 \$0.00 t t 0 \$0.00 \$0.00 t 0 0 \$0.00 \$0.00 t 0 0 \$0.00 \$0.00	FCO3 TOTAL	11.340				\$4.71	\$4.74	\$419.16
15,120 \$6.27 \$6.27 0 \$0.00 \$0.00 ds 0 \$0.00 t 0 0 0 0 \$0.00 t 0 \$0.00 0 0 \$0.00	4	15 120				\$6.27	\$6.27	\$419.16
45,120 \$6.27 \$6.27 \$6.27 ds 0 0 \$0.00 ds 0 0 \$0.00 t 0 0 \$0.00 t 0 0 \$0.00 t 0 0 \$0.00	Urinals) - - -
ds 0 \$0.00<	ECO4 TOTAL:	15,120				\$6.27	\$6.27	\$419.16
ds 0 0 0 \$0.00 \$0.00 t	5	0			0	\$0.00	\$0.00	\$63.65
t \$0.00 \$0.00 \$0.00 t	Shower Heads							
t 0 0 0 \$0.00	ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$63.65
t 0 0 0 \$0.00	9							
00.00\$ 00.00 0 0	Equipment							
00.00\$ 00.00\$ 0 0 0	Related							and the second s
00.0\$ 0.00 \$0.00								
	ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

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K SHEET 1 DATE: FUNCTION: Training Building		FY94S FFAP FT KNOX WAT	NOX WAT A CONSFRVATION STUDY	SNO	ri iny		1 2
Existing Fixture System		CALCUL				DATE:	31 Oct 94
10 10 12 12	FACILITY NO.:	6617	FUNCTION:	, , , ,	raining B	guilding	
Existing Fixture System LPM Description LPM HRS/YR Quantity	Occupancy:	10	Operating Hours:	l	12		
Description LPM Description LPM HRS/YR Quantity	ECO Number	1 ~ 1		E	Usage	Fixtures	Water Leaks
Public Lavatory 9.5 Spring Loaded Faucets 4.7 130 2	ECO Type			LPM	HRS/YR	Quantity	Eliminated LPY
LPM	_			4.7	130	2	15800
LPM	Lavatory Sinks						
LPF	FCO4 TOTAL		5	20		·	15800
Tank Type (public) 11.4 Install 1.6 GPF Tank Type 6 1800 2 Water Closet						1	2000
LPF	Misc. Sinks						
LPF							
Same Tank Type (public) 11.4 Install 1.6 GPF Tank Type 6 1800 2 Same Mounted Flush Valve 1000 1 1 Wall Mounted Flush Valve 1000 1 1 Same Mounted Flush Valve 1000 1 1 Same Manual Mounted Flush Valve 10 1 1 Same Manual	ECO2 TOTAL:			LPF	#FL/YR	0	0
Valid Mounted Flush Valve LPF #FL/YR 2 Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 12000 1 S LPM HRS/YR: 1 S LPM HRS/YR: 1 C C C	3		Install 1.6 GPF Tank	9	1800	2	
Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 12000 1 S LPM Repair Kit ILPM ILPM IRS/YR 1 S ILPM ILPM ILPM 0	Water Closets		Water Closet				
Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 12000 1 S LPM HRS/YR: 1 S LPM HRS/YR: 1 S LPM O 0							
Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 12000 1 Repair Kit ILPM	ECO3 TOTAL:	124			#FL/YR		0
Repair Kit	4		Install	3.79	12000	1	
S LPM: LPM: HRS/YR: 1 S LPM: LPM: HRS/YR: 1 S S S S S S S S S S S S S	Urinals		Repair Kit				
S LDM HRS/YR; 1 S LDM HRS/YR; 1 C C C C C C C C C C C C C C C C C C							
	ECO4 TOTAL:		William Commence of the Commen		HRS/YR		0
	2						
	Shower Heads						
	ECO5 TOTAL:	AND SECTION OF THE PROPERTY OF		LPM		0	0
	9						
	Equipment						
	Related						
	FCO6 TOTAL:					С	c
						,	

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	FΥ9	FY94S EEAP		FT. KNOX WA	A ER CONSER	ER CONSERVATION STUDY	2 OF 2
		Ö	ALCULA:	TION WO	CALCULATION WORK SHEET 2		
FACILITY NO.: 6617	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
;	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ECO Number	Annual Water	Annua	Annual Energy	Saving	WATER	Total	Total
ECO Type	Saving LPY	ELEC KW	ELEC KWH	GAS	Dollar Saving	Dollar Saving	Dollars Invested
1	5			0	\$45.24	\$47.86	\$489.60
Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
ECO1 TOTAL:	109,010	0	0	0	\$45.24	\$47.86	\$489.60
2	0			0	\$0.00	\$0.00	\$0.00
Misc. Sinks							
ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
3	19,440				\$8.07	\$8.07	\$838.32
Water Closets							
ECO3 TOTAL:	19,440				\$8.07	\$8.07	\$838.32
4	22,680				\$9.41	\$9.41	\$63.65
Urinals							
ECO4 TOTAL:	22,680				\$9.41	\$9.41	\$63.65
5	0			0	\$0.00	\$0.00	\$0.00
Shower Heads							
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	00.08
9							
Equipment							
Related							
ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
SYSTEMS CORP	ORP			Systems	s Engineering and	Systems Engineering and Management Corporation,	ooration, Knoxville, TN

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	FY94S FFAP F	T KNC	FY94S FFAP FT KNOX WAT & CONSFRVATION STIIDY	S NCI	YUIT		102
	O IVO	TA III	CIII ATION WORK SHEET 1			DATE.	34 Oct 94
FACILITY NO. :	6620		FUNCTION:		Performing Arts	y Arts	
Occupancy:			Operating Hours:	'			
ECO Number	Existing Fixture System		Retrofited Fixture System	E	Usage	Fixtures	Water Leaks
ECO Type	Description	LPM	Description	LPM	HRS/YR	Quantity	Eliminated LPY
1	Public Lavatory	9.5	Spring Loaded Faucets	4.7	130	9	
Lavatory Sinks							
ECO1 TOTAL:		LPM		LPM		9	0
2							
Misc. Sinks							
1		1				· ·	
ECO2 TOTAL:		LPF		LPF	#FL/YR	0	0
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	1300	9	
Water Closets			Repair Kit				
ECO3 TOTAL:		LPF		LPE	#FL/YR	9	0
4	Wall Mounted Flush Valve	2.68	Install 1.0 GPF Flush Valve	3.79	1300	2	
Urinals			Repair Kit				
	The second of th	7				,	
ECO4 IOIAL:		L P M		L E	HKS/YK	7	0
5							
Shower Heads							
TOOP TOTAL		MC		7.0		Ç	
ECOS IOIAL.		IL IN		E L		2	0
9					-		
Equipment							
Related							
FCO6 TOTAL				3, 6		c	0
						,	

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	FY9	FY94S EEAP		FT. KNOX W		ER CONSERVATION STUDY	7 2 OF 2
		CAI	ALCULA ⁻	FION WO	치		
FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ECO Number	Annual Water	Annual		Saving	WATER	Total	Total
ECO Type	Saving LPY	ELEC KW	HMX ELEC	GAS MWH	Dollar Saving	Dollar Saving	Dollars Invested
	33			1	\$116.05	\$122.76	\$1,468.80
Lavatory Sinks							
ECO1 TOTAL:	279,630	0	0	-	\$116.05	\$122.76	\$1,468.80
2	0			0	\$0.00	\$0.00	\$0.00
Misc. Sinks				0			
ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
3	29,640				\$12.30	\$12.30	\$360.29
Water Closets							
ECO3 TOTAL:	29,640				\$12.30	\$12.30	\$360.29
4	4,914				\$2.04	\$2.04	\$127.30
Urinals			a para de la companya				
ECO4 TOTAL:	4,914				\$2.04	\$2.04	\$127.30
2	0			0	\$0.00	\$0.00	\$0.00
Shower Heads							
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
9							
Equipment							
Related							
ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
SYSTEMS CORP	ORP			Systems	Engineering and	Systems Engineering and Management Corporation,	rporation, Knoxville, TN

	FY94S EEAP FT		F. KNOX WATER CONSERVATION STUDY	S NO	TUDY		1 2
	CALC		CALCULATION WORK SHEET 1			DATE:	31 Oct 94
FACILITY NO. :	6239		FUNCTION:	-,	Admin Facility	sility	
Occupancy:	40		Operating Hours:	,	12		
ECO Number	Existing Fixture System		Retrofited Fixture System	ш	Usage	Fixtures	Water Leaks
ECO Type	Description	LPM	Description	LPM	HRS/YR	Quantity	Eliminated LPY
1	Public Lavatory	9.2	Spring Loaded Faucets	4.7	130	3	
Lavatory Sinks							
ECO1 TOTAL:		LPM		LPM		8	0
2							
Misc. Sinks							
EC02 TOTAL:		LPF		LPF	#FL/YR		0 _
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	10400	3	
Water Closets			Repair Kit				
ECCS TOTAL .		ייי		L	יייייייייייייייייייייייייייייייייייייי		
ECOS TOTAL.		ב ב		7	#FLTTR	2	2
4 Hrinale							
ECO4 TOTAL:		LPM	は、これのでは、 一般のできない こうしょう しょうしょう	LPM	HRS/YR	0	0
5							
Shower Heads							
ECOE TOTAL .		DAG		210			
6		E		E L			
Equipment							
Related							
1							
ECO6 IOIAL:						0	0

Systems Engineering and Management Corporation, Knoxville, TN

\$/KL Energy Rate: \$/KW \$/MWH Demand Rate: \$/KW = ELEC GAS WATER Total ELEC GAS	Water Rate: 0.42 \$/KL Gas Rate: 10.51 \$/MWH Saving LPY KW KWH 139,815 0 0 0 0 0 0	Case Rate: 0.42 \$/KL Energy Rate: \$/KW Case Rate: 10.51 \$/MWH Demand Rate: \$/KW Case Rate: 10.51 \$/MWH Demand Rate: \$/KW Case Rate: 10.51 \$/MWH Demand Rate: \$/KW Case Rate: Case Rate		FY	FY94S EEAP CAI		NOX W	LCULATION WORK SHEET 2	FT. KNOX WATER CONSERVATION STUDY CULATION WORK SHEET 2	2 OF 2
Annual Water Annual Energy Saving Annual Water Annual Energy Saving ELEC ELEC GSS SSS SSS	Cas Rate: 10.51 \$/MWH	Cas Rate: 10.51 \$/MWH	FACILITY NO. :	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
Saving LPY KWH KWH MWH	Saving LPY KW KWH 139,815 0 0 0 0 0 0 0 0 0 0	Saving LPY KW KWH 139,815 CORP Color	6700	Gas Rate:	10.51	#WW/\$		Demand Rate:		\$/KW
ks ELEC ELEC GAS Dollar Saving Dollar Saving Dollar Saving Dollar Saving Dollar Saving Dollar Saving PSB.02 \$61.38 139,815 0 0 0 \$58.02 \$61.38 139,815 0 0 0 \$50.00 \$50.00 5 0 0 0 \$50.00 \$50.00 5 118,560 0 0 \$49.20 \$49.20 14s 118,560 0 \$6.00 \$6.00 6 0 \$6.00 \$6.00 6 0 \$6.00 \$6.00 6 \$0.00 \$6.00 \$6.00 6 0 \$6.00 \$6.00 6 0 \$6.00 \$6.00 6 0 \$6.00 \$6.00 7 \$6.00 \$6.00 8 \$6.00 \$6.00 9 \$6.00 \$6.00 1 \$6.00 \$6.00 1	Saving LPY KW KWH KWH 139,815 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Saving LPY KW KWH KWH 139,815 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ECO Number	Annual Water	ਲ		aving	WATER	Total	Total
ks 0 \$58.02 \$61.38 139,815 0 0 \$0.00 \$0.00 139,815 0 0 \$60.00 \$0.00 s 0 0 \$60.00 \$0.00 s 0 0 \$0.00 \$0.00 ts 118,560 \$0.00 \$49.20 \$49.20 ts 0 0 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00	ts 139,815	139,815 139,815 0 139,815 0 0 0 0 0 0 0 0 0 0 0 0 0	ECO Type			ELEC KWH	GAS	Dollar Saving	Dollar Saving	Dollars Invested
139,815	139,815	ts 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		139,815	┨─		0	\$58.02	\$61.38	\$734.40
139,815	139,815 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	tr 139,815 0 0 0 0 0 118,560 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
S 0 \$0.00 \$0.00 S 0 0 \$0.00 41 0 0 \$0.00 45 \$0.00 \$0.00 45 \$0.00 \$0.00 46 0 \$0.00 47 \$0.00 \$0.00 48 \$0.00 \$0.00 40 \$0.00 \$0.00 41 \$0.00 \$0.00 42 \$0.00 \$0.00 45 \$0.00 \$0.00 45 \$0.00 \$0.00 46 \$0.00 \$0.00 47 \$0.00 \$0.00	s 0 0 0 0 118,560 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	tr 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ECO1 TOTAL:	139,815	0	0	0	\$58.02	\$61.38	\$734.40
ts	t 118,560 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	s 0 0 0 0 0 118,560 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2	0			0	\$0.00	\$0.00	\$0.00
ts	ts 118,560 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ds	Misc. Sinks							O
its 118,560 \$49.20 \$49.20 118,560 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00	ts	ts	ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
tfs	ts	ds 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3	118,560				\$49.20	\$49.20	\$190.94
118,560 \$49.20 \$49.20 0 \$0.00 \$0.00 ds 0 0 \$0.00 t 0 0 \$0.00	ds 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ds 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Water Closets							
0 \$0.00 \$0.00 \$0.00	0 0 0	0 0 0	ECO3 TOTAL:	118,560				\$49.20	\$49.20	\$190.94
ds	0 0	0 0	4	0				\$0.00	\$0.00	\$0.00
ds	0 0 0	0 0 0	Urinals				And the state of t			
ds 0 \$0.00 \$0.00 ds 0 0 \$0.00 t 0 0 \$0.00 \$0.00 t 0 0 \$0.00 \$0.00 t 0 0 \$0.00 \$0.00	0 0 0	0 0 0	ECO4 TOTAL:	0				\$0.00	\$0.00	\$0.00
t \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	0 0 0	0 0 0	5	0			0	\$0.00	\$0.00	\$0.00
t t 0 0 0 0 \$0.00	0 0 0	0 0 0	Shower neads							
t 0 0 0 \$0.00	0 0 0	0 0 0	ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
0 0 0 \$0.00	0 0 0	0 0	9							
00.0\$ 0.00 0 0 0	0 0	0 0	Equipment						account of the control of the contro	
00.0\$ 0.00 0 0 0	0 0 0	0 0 0	Related							
00.0\$ 0.00 0 0 0	0 0 0	0 0 0							A THE RESIDENCE OF THE PARTY OF	
			ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

				1			
	CW NOITA IIIO IAO	ŽIV =	CALCILI ATION MOBY SUBET 4		- 2	1144	7 0 70
		- F	ON WORN SHEET I			DAIE	31 OCL 34
FACILITY NO.:	6631		FUNCTION:		Officers Quarters	uarters	
Occupancy:	16		Operating Hours:	,	ransient 24		
ECO Number	Existing Fixture System		Retrofited Fixture System	L L	Usage	Fixtures	Water Leaks
ECO Type		LPM	Description	LPM	HRS/YR	Quantity	Eliminated LPY
1 Lavatory Sinks	Private Lavatory	7-	Spring Loaded Faucets	4.7	130	16	
ECO1 TOTAL:		PM		PM		16	O
2							
Misc. Sinks							
ECO2 TOTAL:		LPF		I PF	#FI WR	C	C
┢	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	1825		
Water Closets			Repair Kit				
ECO3 TOTAL:		LPF	11日の日本の日本の日本の日本の日本の日本の日本の日本の日本の日本の日本の日本の日本	LPF	#FL/YR	16	0
4							
Olillais							
ECO4 TOTAL:		LPM		LPM	HRS/YR	0	0
5							
Shower Heads							
FCOS TOTAL		MQ		ANG -		c	c
9			・ こうこん いんこうしょう 非英雄ない おんしゃ こうしゅう				
Equipment							
Related							
FCO6 TOTAL		- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1				-	
SYSTEMS CORP		system	Systems Engineering and Management Corporation,	nent C	orporation	l .	Knoxville, TN

Systems Engineering and Management Corporation, Knoxville, TN

FACILITY NO.: Water Rate: 0.42 \$KL Energy Rate: \$KWH 6631 Gas Rate: 10.51 \$MWH Demand Rate: \$KWH ECO Number Annual Water Annual Mater Annual Water Annual Mater Total Total ECO Type Saving LPY KW KWH MWH Dollar Saving Total ECO TOTAD 932,880 0 0 \$0.00	Water Rate: 0.42 \$/KL Energy Rate: \$/KWH Gas Rate: 10.51 \$/MWH Demand Rate: \$/KWH Annual Water Annual Energy Saving ELEC ELEC ELEC GAS Saving On O O O Saving On O O O Saving On O O O Saving On O O Saving On O O O Saving On O O O Saving On O O O O Saving On O O O Saving On O O O O Saving On O O O O O O O O O O O O O O O O O		FY	FY94S EEAP FT. KNOX WA CALCULATION WOF	FT. KN	MOX WO		ER CONSERVATION STUDY (SHEET 2	2 OF 2
Gas Rate: 10.51 \$MMVH Demand Rate: \$KW Annual Water Annual ELEC GARS WATER Total Saving LPY KW KWH MWH Dollar Saving Total \$32,880 0 0 \$387.15 \$409.56 \$0 0 0 \$0.00 \$0.00 \$0 0 \$0.00 \$0.00 \$0.00 \$110,960 \$0 \$0 \$0.00 \$0.00 \$0 \$0 \$0 \$0.00 \$0.00 \$0 \$0.00 \$0.00 \$0.00 \$0.00 \$0 \$0.00 \$0.00 \$0.00 \$0.00 \$0 \$0.00 \$0.00 \$0.00 \$0.00	Gas Rate: 10.51 \$/MWH Annual Water Annual Energy ELEC	FACILITY NO. :	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
sr Annual Water Annual Energy Saving WATER Total Saving LPY KW KWH MWH Dollar Saving Dollar Saving 832,880 0 0 2 \$387.15 \$409.56 932,880 0 0 2 \$387.15 \$409.56 0 0 0 \$0.00 \$0.00 \$0.00 110,960 0 0 \$46.05 \$46.05 110,960 \$6.00 \$0.00 \$0.00 6 \$0.00 \$0.00 \$0.00 6 \$0.00 \$0.00 \$0.00 6 \$0.00 \$0.00 \$0.00 6 \$0.00 \$0.00 \$0.00	ual Water Annual Energy ual Water Annual Energy ng LPY KW 22,880 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	-	Gas Rate:	1	\$/MWH		Demand Rate:		\$/KW
ks ELEC ELEC ELEC GAS Dollar Saving Dollar Saving Dollar Saving Dollar Saving S409.56 ks 0 0 0 \$80.00 \$000 s 0 0 0 \$0.00 \$0.00 s 0 0 0 \$0.00 \$0.00 ts 110,960 0 0 \$46.05 \$46.05 to 0 0 \$46.05 \$46.05 to 0 \$546.05 \$6.00 \$6.00 ds 0 0 \$6.00 \$6.00 tr t 0 \$6.00 \$6.00 \$6.00 t 0 0 \$6.00	10,960 10,960	ECO Number	Annual Water			aving	WATER	Total	Total
ks 932,880 2 \$387.15 \$409.56 ks 0 \$0.00 \$0.00 \$0.00 s 0 0 \$0.00 \$0.00 s 0 0 \$0.00 \$0.00 ts 110,960 \$0.00 \$46.05 \$46.05 to 0 \$0.00 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 \$0.00 t 0 \$0.00 \$0.00 \$0.00	32,880 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ECO Type			ELEC	GAS	Dollar Saving	Dollar Saving	Dollars Invested
ks 0 \$0.00 \$0.00 ks 0 0 \$0.00 s 0 0 \$0.00 \$0.00 s 0 0 \$0.00 \$0.00 ts 110,960 \$0.00 \$0.00 \$0.00 ts 110,960 \$0.00 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 \$0.00 t 0 \$0.00 \$0.00 \$0.00 t 0 \$0.00 \$0.00 \$0.00 t 0 \$0.00 \$0.00 \$0.00	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	-	932,880			2	\$387.15	\$409.56	\$3,916.80
932,880 0 0 2 \$387.15 \$409.56 s 0 0 \$0.00 \$0.00 s 0 0 \$0.00 \$0.00 ts 110,960 \$46.05 \$46.05 ts \$46.05 \$46.05 0 \$0.00 \$0.00 ds 0 \$0.00 t 0 \$0.00 t 0 \$0.00 t \$0.00 \$0.00 t \$0.00 \$0.00	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
s	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ECO1 TOTAL:	932,880	0	0	2	\$387.15	\$409.56	\$3,916.80
s	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2	0			0	\$0.00	\$0.00	\$0.00
sts	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Misc. Sinks			The state of the s				
110,960 \$46.05 \$46.05 110,960 \$46.05 \$46.05 110,960 \$0.00 \$0.00 0 \$0.00 \$0.00 ds 0 \$0.00 ds \$0.00 \$0.00 tr 0 \$0.00 \$0.00	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
110,960 \$46.05 \$46.05 \$0.00 \$0	0 0 0 0 0 0 0 0 0 0	3	110,960				\$46.05	\$46.05	\$960.77
110,960 \$46.05 \$46.05 \$0.00 \$0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Water Closets							
0	0 0 0	ECO3 TOTAL:	110,960				\$46.05	\$46.05	\$960.77
ids 0 0 0 0 \$0.00 \$0.00 \$0.0		4	0				\$0.00	\$0.00	\$0.00
ids 0 0 \$0.00 \$0.00 \$0.00	0 0 0	Urinals							
O	0 0 0	ECO4 TOTAL:	0				\$0.00	\$0.00	\$0.00
ids	0 0 0	5	0			0	\$0.00	\$0.00	\$0.00
t	0 0 0	Shower Heads							
00.00\$ 00.00 \$0.00	0 0 0	ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
00.0\$ 00.00 0 0	0 0	9							
00.0\$ 0 0 0 0	0 0	Equipment							
00.0\$ 0 0 0 0 0	0 0 0	Kelated							
00.0\$ 00.0\$ 0 0 0 0	0 0								
		ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

	FY94S EEAP F	T. KN	FY94S EEAP FT. KNOX WAFER CONSERVATION STUDY	S NO	ruby		10,2
	CAL	CULAT	CALCULATION WORK SHEET 1			DATE:	31 Oct 94
FACILITY NO.:	0299		FUNCTION:		Enlisted Barracks	arracks	
Occupancy:	12		Operating Hours:	r	15		
ECO Number	Existing Fixture System		Retrofited Fixture System	٦	Usage	Fixtures	Water Leaks
ECO Type	Description	LPM	Description	LPM	HRS/YR	Quantity	Eliminated LPY
	Public Lavatory	9.5	Spring Loaded Faucets	4.7	730	9	
Lavatory Sinks							
ECO1 TOTAL:		LPM		LPM		9	0
2	Service Sink	23	Install Aerators	9.5	2080	-	
Misc. Sinks							
ECO2 TOTAL:		LPF		LPF	#FL/YR	1	0
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	2000	5	
Water Closets			Repair Kit				
FCO3 TOTAL .		100		- - -	#EI NB	4	
. 11.0	Well Mounted Elijeh Valve	7 8 8 8	Install 1 0 CDE Elijeh Valvo	2 70	0008	, ,	>
Urinals	Vall Modified Flasi Valve	00.00	Repair	5.73	0000	2	
ECO4 TOTAL:		LPM		LPM	HRS/YR	3	0
Shower Heade							
Ollower Heads							
ECO5 TOTAL:		LPM		LPM		0	0
9							
Equipment							
Related							
ECO6 TOTAL:						0	0

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	FY9	4S EEA	P FT. K	NOX W	ER CONSER	FY94S EEAP FT. KNOX WAER CONSERVATION STUDY	2 OF 2
		/S	ALCULAT	TION WO	CALCULATION WORK SHEET 2		
FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ECO Number	Annual Water	Annua	Annual Energy	Saving	WATER	Total	Total
ECO Type	Saving LPY	ELEC	ELEC KWH	GAS MWH	Dollar Saving	Dollar Saving	Dollars invested
-	1,570,230			4	\$651.65	\$689.37	\$1,468.80
Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
ECO1 TOTAL:	1,570,230	0	0	4	\$651.65	\$689.37	\$1,468.80
2	1,684,800			4	\$6.99	\$47.47	\$9.70
Misc. Sinks							
ECO2 TOTAL:	1,684,800	0	0	4	\$6.99	\$47.47	\$9.70
3	38,000				\$15.77	\$15.77	\$300.24
Water Closets							
ECO3 TOTAL:	38,000				\$15.77	\$15.77	\$300.24
4	34,020				\$14.12	\$14.12	\$190.94
Urinals							
ECO4 TOTAL:	34,020				\$14.12	\$14.12	\$190.94
2	0			0	\$0.00	\$0.00	\$0.00
Shower Heads							
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
9							
Equipment						make department of the second	
Related							
ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

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FOLILIY NO. 6758 FUNCTION: Training Building		FY94S EEAP FT		KNOX WALL CONSERVATION STUDY	S NO	TUDY		102
State Composition Compos		CALC	CULAT	ION WORK SHEET 1			DATE:	31 Oct 94
Existing Fixture System Retrofited Fixture System Description LPM Description LPM RESYR Quantity	FACILITY NO.:	6758		FUNCTION:		Training B	uilding	
Existing Fixture System Retrofited Fixture System Usage Fixtures	Occupancy:	හ <u>ා</u>		Operating Hours:		16		
Description LPM Description LPM HRS/YR Quantity	ECO Number	Existing Fixture System		Retrofited Fixture Syster	E	Usage	Fixtures	Water Leaks
Public Lavatory 9.5 Spring Loaded Faucets 4.7 130 10	ECO Type	Description	LPM	Description	ПРМ	HRS/YR	Quantity	Eliminated LPY
LPM	τ-	Public Lavatory	9.5	Spring Loaded Faucets	4.7	130	10	
Floor Mounted Flush Valve	Lavatory Sinks							
Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 1300 7	ECO1 TOTAL:		LPM		LPM			0
Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 1300 7	2							
Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 1300 7	Misc. Sinks							
Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 1300 7								
Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 1300 7	ECO2 TOTAL:		LPF		LPF	#FL/YR	0	0
Nail Mounted Flush Valve LPF #FL/YR 7	ဗ	Floor Mounted Flush Valve	17	3.5 GPF	13.2	1300	7	
Wall Mounted Flush Valve LPF #FL/YR 7 Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 1300 4 LPM Repair Kit LPM 4 S LPM HRS/YR 4 LPM LPM LPM 0	Water Closets			Repair Kit				
LPF #FLYR 7 Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 1300 4 LPM Repair Kit LPM 4 LPM LPM 4 LPM LPM 0								
Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 1300 4 Repair Kit LPM HRS/YR: 4 S LPM HRS/YR: 4 ILPM LPM STORE ST	ECO3 TOTAL:		LPF		LPF	#FL/YR	7	0
Repair Kit	4	Wall Mounted Flush Valve	5.68		3.79	1300	4	
S LPM : HRS/YR 4 S LPM : HRS/YR 4 C S S	Urinals			Repair Kit				
S S LPM : HRS/YR								
	ECO4 TOTAL:		LPM		LPM	HRS/YR	4	0
	5							
	Shower Heads							
	ECO5 TOTAL:		LPM		LPM	A Commence of the Commence of		0
	9							
	Equipment							
	Related							
	. IATOT SOCI				3 4	77 4 2		
	ECO IOIAL:						0	0

Systems Engineering and Management Corporation, Knoxville, TN

		1 0 7	7	10 X X X	G1000 G-	VG1170 14017 41	
	% L	45 EEA	7 2 2	M YOU	ER CONSEIX	CALOII ATION WORK CONSEIVATION STUDY	2 OF 2
		S	ALCULA!	ON NO	CULATION WORK SHEET 2		
FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
5	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ECO Number	Annual Water	Annual	Energy	Saving	WATER	Total	Total
ECO Type	Saving LPY	ELEC		GAS MWH	Dollar Saving	Dollar Saving	Dollars Invested
-	5			_	\$193.41	\$204.61	\$2,448.00
Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
ECO1 TOTAL:	466.050	0	0	4-	\$193.41	\$204.61	\$2.448.00
2	0			0	\$0.00	\$0.00	\$0.00
Misc. Sinks							
ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
3	34,580				\$14.35	\$14.35	\$420.34
Water Closets							
ECO3 TOTAL:	34,580				\$14.35	\$14.35	\$420.34
4	9,828				\$4.08	\$4.08	\$254.59
Urinals							
ECO4 TOTAL:	9,828				\$4.08	\$4.08	\$254.59
5	0			0	\$0.00	\$0.00	\$0.00
Shower Heads							
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
9							
Equipment							
Related							
ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

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	FY94S EEAP FT	KN	EY94S EEAP FT. KNOX WAT	S NO	TUDY		10
	CALC	ULAT	CALCULATION WORK SHEET 1			DATE:	31 Oct 94
FACILITY NO.:	6837		FUNCTION:		Clinic		
Occupancy:	10		Operating Hours:	• :	80		
ECO Number	Existing Fixture System		Retrofited Fixture System		Usage	Fixtures	Water Leaks
ECO Type	Description	LPM	Description	LPM	HRS/YR	Quantity	Eliminated LPY
	Public Lavatory	9.5	Spring Loaded Faucets	4.7	130	10	
Lavatory Sinks							
ECO1 TOTAL:		LPM		LPM	東京の 東京 日本の こうかん	10	0
2	Service Sink	19	Install Aerators	9.5	130	3	
Misc. Sinks							
ECO2 TOTAL		LPF		LPF	#FL/YR		0
3 10 10 10 10 10 10 10 10 10 10 10 10 10	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	2200	9	
Water Closets		:	Repair Kit				
ECO3 TOTAL:		LPF	。	LPF	#FL/YR	9	0
4	Wall Mounted Flush Valve	5.68	Install 1.0 GPF Flush Valve	3.79	7800	-	
Urinals			Repair Kit				
ECO4 TOTAL:	· · · · · · · · · · · · · · · · · · ·	LPM	· 不知 · · · · · · · · · · · · · · · · · ·	LPM	LPM HRS/YR		0
5							
Shower Heads							
FCO5 TOTAL		Md		LPM	教授 经营	0	0
9							
Equipment							
Related							
TOT SOCI		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			朝の本語のかれれる	0	0
ECOO LOIAL.		14.)	

Systems Engineering and Management Corporation, Knoxville, TN

	FY9	FY94S EEAP	P FT. KI	FT. KNOX WA	R CONSER	R CONSERVATION STUDY	2 OF 2
		CAL	ALCULAT	IOM NOI	CULATION WORK SHEET 2		
FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ECO Number	Annual Water	Annual	Energy	Saving	WATER	Total	Total
ECO Type	Saving LPY	ELEC KW	ELEC	GAS	Dollar Saving	Dollar Saving	Dollars Invested
1	466,050			1	\$193.41	\$204.61	\$2,448.00
Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
ECO1 TOTAL:	466.050	0	0	7-	\$193.41	\$204.61	\$2.448.00
2	222,300			-	\$0.92	\$0.98	\$29.09
Misc. Sinks							
ECO2 TOTAL:	222.300	0	0	-	\$0.92	\$0.98	\$29.09
3	50,160				\$20.82	\$20.82	\$360.29
Water Closets							
TATOL COOL	007				000	000	00 0000
ECO3 IOIAL:	50,160				\$20.82	\$20.8Z	\$360.29
4 Urinals	14,742				\$6.12	\$6.12	\$63.65
ECO4 TOTAL:	14,742				\$6.12	\$6.12	\$63.65
2	0			0	\$0.00	\$0.00	\$0.00
Shower Heads							
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
9							
Equipment							
Related							
ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

	FY94S EEAP FT. KNOX WA	T. KNC	X WAT R CONSERVATION STUDY	ON ST	Vau		10
	CALC	CULATI	뙷			DATE:	31 Oct 94
FACILITY NO.:	6863	,	FUNCTION:	ш	Enlisted Barracks	arracks	
Occupancy:			Operating Hours:	1			
ECO Number ECO Type	Existing Fixture System Description	LPM	Retrofited Fixture System Description	PM	Usage HRS/YR	Fixtures Quantity	Water Leaks Eliminated LPY
1 Lavatory Sinks	Public Lavatory	9.5	Spring Loaded Faucets	4		4	
ECO1 TOTAL:		LPM		LPM		4	0
2 Misc. Sinks							
ECO2 TOTAI ·		1 DE		1 PF	#FI MR	o	C
3							
Water Closets							
ECO3 TOTAL:		LPF		LPF	#FL/YR	0	0
4 Urinals							
ECO4 TOTAL:		LPM		LPM	HRS/YR	0	0
5 Shower Heads							
ECO5 TOTAL:		LPM		LPM		0	0
6 Equipment Related							
ECO6 TOTAL:						0	0
SYSTEMS CORP	ORP	Systen	Systems Engineering and Management Corporation,	nent Co	rporation	ı	Knoxville, TN

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	FYG	EV94S FEAD		VM XON	BCONSED	ET KNOY WA	2000
		CAI		IOM NOI	LCULATION WORK SHEET 2		7 10 7
FACILITY NO. :	Water Rate:	0.42	\$/KL		Energy Rate:	\$	\$/KWH
	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ECO Number	Annual Water	Annual	Energy	Saving	WATER	Total	Total
ECO Type	Saving LPY	ELEC KW	ELEC	GAS	Dollar Saving	Dollar Saving	Dollars Invested
	186,420			0	\$77.36	\$81.84	\$979.20
Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
ECO1 TOTAL:	186,420	0	0	0	\$77.36	\$81.84	\$979.20
2	0			0	\$0.00	\$0.00	\$0.00
Misc. Sinks							
ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
3	0				\$0.00	\$0.00	\$0.00
Water Closets							
FCO3 TOTAL	0				00 0\$	00 0\$	00 0\$
4	0				\$0.00	\$0.00	\$0.00
Urinals							
ECO4 TOTAL:	0				\$0.00	\$0.00	\$0.00
5	0			0	\$0.00	\$0.00	\$0.00
Shower Heads							
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
9							
Equipment							
Related		The state of the s					-
ECO6 TOTAL:	О	0	0	0	\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

	FY94S FFAP FT	X X	F KNOX WATE CONSERVATION STUDY	S NOI	TUDY		101
	CALC	ULAT	CULATION WORK SHEET 1			DATE:	31 Oct 94
FACILITY NO.:	6894	·	FUNCTION:	,	Storage		,
Occupancy:			Operating Hours:	'			
ECO Number	Existing Fixture System		Retrofited Fixture System	E	Usage	Fixtures	Water Leaks
ECO Type		LPM	Description	LPM	HRS/YR	Quantity	Eliminated LPY
1	Private Lavatory	17	Spring Loaded Faucets	4.7	20	2	
Lavatory Sinks			(NO MIXING VALVE)				
ECO4 TOTAL.		MO		MG	A Comment Control	,	C
ECO 101AE.						1	
2 Misc. Sinks							
ECO2 TOTAL:		LPF		LPF	#FL/YR	0	0
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	20	2	
Water Closets			Repair Kit				
	Tank Type (private)	11.4	Install 1.6 GPF Tank Type	9			
ECO3 TOTAL:	J. \$28 E. C.	LPF		LPF	#FLYR	3	0
4		-					
Urinals							
ECO4 TOTAL:	With the second	LPM		LPM	LPM HRS/YR	0	0
2							
Shower Heads							
FCOS TOTAL .		Md		Md	Signal Si	0	0
9							
Equipment							
Related							
TOTE TOTAL .	A Company of the Comp					c	c
ECOS IOIAL:					\$ 1 - 1 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 -		

	FY9.	FY94S EEAP		FT. KNOX WAT		R CONSERVATION STUDY	2 OF 2
		Ö	ALCULAT	IOM MOI			
FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
† 0 0	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ECO Number	Annual Water	Annual	Energy	Saving	WATER	Total	Total
ECO Type	Saving LPY	ELEC KW	ELEC KWH	GAS MWH	Dollar Saving	Dollar Saving	Dollars Invested
1	6			0	\$13.42	\$14.20	\$489.60
Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
FCO1 TOTAL:	32.340	0	0	0	\$13.42	\$14.20	\$489.60
2	0			0	\$0.00	\$0.00	\$0.00
Misc. Sinks					ļ		
ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
3	152				\$0.06	\$0.06	\$120.10
Water Closets							\$419.16
	108				\$0.04	\$0.04	\$0.00
ECO3 TOTAL:	260				\$0.11	\$0.11	\$539.26
4	0				\$0.00	\$0.00	\$0.00
Urinals							
ECO4 TOTAL:	0				\$0.00	\$0.00	\$0.00
5	0			0	\$0.00	\$0.00	\$0.00
Shower Heads		di sense					
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
9							
Equipment						100000000000000000000000000000000000000	
Related							
ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

	TAM XUNX TE AP ET KNOX WAT	KNZ	Y WATERVATION STILLY	S NO	XOI I		10
	CALC	CULATI	X			DATE:	29 Oct 94
FACILITY NO. :	2689		FUNCTION:	 1	Maintenance	90	
Occupancy:	4		Operating Hours:		8		
ECO Number	Existing Fixture System	- DAG	Retrofited Fixture System	n DMG	Usage	Fixtures	Water Leaks
ECO Type	Public Lavatory	26.5	Spring Loaded Faucets	4.7	730	1	
Lavatory Sinks							
FCO1 TOTAL:		LPM		LPM		_	0
2							
Misc. Sinks							
ECO2 TOTAL:		LPF		LPF	#FL/YR	0	0
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	18250	1	
Water Closets			Repair Kit				
ECO3 TOTAL:	· 10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	LPF		LPF	#FL/YR	1	0
4							
Urinals							
ECO4 TOTAL:		LPM		LPM	HRS/YR	0	0
5							
Shower Heads							
ECO5 TOTAL:		LPM		LPM		0	0
9 .							
Equipment							
Kelated							
ECO6 TOTAL:	を 1.5 (1) (1) (1) (1) (2) (2) (2) (2) (2) (2) (2) (2) (2) (2	7 1 1 7 1 2 1 2 2 4		7 A 7 B 7 B 7 B 7 B 7 B		0	0

Systems Engineering and Management Corporation, Knoxville, TN

CALCULATION WORK SHEET 2 CALCULATION WORK SHEET 2 S/KW Cas Rate: 0.42 S/KL Energy Rate: S/KW Cas Rate: 0.42 S/KW ELEC GAS Saving LPY KW KWH MWH Dollar Saving VATER Total Saving LPY KW KWH MWH Dollar Saving S0.00		EVQ	V	D FT K	M XUN		R CONSERVATION STIIDY	2 OF 2
Water Rate: 0.42 \$/KL Energy Rate: \$/KL Frenery Rate: \$/KW Cas Rate: 10.51 \$/MWH Demand Rate: \$/KW \$/KWH \$/KWH <td< td=""><td></td><td></td><td></td><td>LCULAT</td><td>IOM NOI</td><td>RK SHEET 2</td><td></td><td></td></td<>				LCULAT	IOM NOI	RK SHEET 2		
Gas Rate: 10.51 \$\text{MVMVH}\$ Demand Rate: \$\text{SMVMVTER}\$ Demand Rate: \$\text{SMVMTER}\$ \$\text{SMVMTER}\$ \$\text{Total}\$ \$\text{SMVMTER}\$ \$\text{Total}\$ \$\text{SMMTER}\$ \$\text{SMMTER}\$ \$\text{Total}\$ \$\text{SMMTER}\$ \$\text{Total}\$ \$\text{SMMTER}\$ \$SMM	FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
Saving LPY KW KWH MWH Dollar Saving NATER Total FLEC ELEC GAS Saving LPY KW KWH MWH Dollar Saving Dollar Saving Saving LPY KW KWH MWH Dollar Saving Dollar Saving Saving Collar Saving Collar Saving Collar Saving Collar Saving Saving Collar		Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
Saving LPY KWH MWH Dollar Saving	ECO Number	Annual Water	Annual		Saving	WATER	Total	Total
1,006,305	ECO Type		ELEC KW	ELEC	GAS	Dollar Saving	Dollar Saving	Dollars Invested
1,006,305	-	1,006,305			3	\$417.62	\$444.21	\$244.80
1,006,305	Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
1,006,305 0 3 \$417.62 \$444.21 (s) 0 0 \$0.00 \$0.00 (s) 0 \$0.00 \$0.00 \$0.00 (s) 0 \$0.00 \$0.00 \$0.00 (s) 0 \$0.00 \$0.00 \$0.00 (s) (s) \$0.00 \$0.00 \$0.00 </td <td>The state of the s</td> <td>0</td> <td></td> <td></td> <td>0</td> <td>\$0.00</td> <td>\$0.00</td> <td>\$0.00</td>	The state of the s	0			0	\$0.00	\$0.00	\$0.00
(s 0 \$0.00 \$0.00 (s 0 \$0.00 \$0.00 (s 0 0 \$0.00 (s 0 \$0.00 \$0.00 (s 0 \$0.00 \$0.00 (s \$0.00 \$0.00 \$0.00	ECO1 TOTAL:	1,006,305	0	0	3	\$417.62	\$444.21	\$244.80
s 0 \$0.00 \$0.00 c 0 \$0.00 \$0.00 c 0 0 \$0.00 c 0 0 \$0.00 c 0 \$0.00 \$0.00 c 0 \$0.00 \$0.00 c \$0.00 \$0.00 \$0.00 c \$0.	2	0			0	\$0.00	\$0.00	\$0.00
0	Misc. Sinks	0			0	\$0.00	\$0.00	\$0.00
69,350 69,350 \$0.00 \$0.00 \$0.00 (69,350 \$0.00 \$0.00 \$0.00 \$0.00 (69,350 \$0.00 \$0.00 \$0.00 \$0.00 (69,350 \$0.00 \$0.00 \$0.00 \$0.00 (70 \$0.00 \$0.00 \$0.00 \$0.00 (80,350 \$0.00 \$0.00 \$0.00 \$0.00 (80,350 \$0.00 \$0.00 \$0.00 \$0.00 (90 \$0.00 \$0.00 \$0.00 \$0.00 (10 \$0 \$0.00 \$0.00 \$0.00 (10 \$0 \$0.00 \$0.00 \$0.00 (10 \$0 \$0.00 \$0.00 \$0.00 (10 \$0 \$0.00 \$0.00 \$0.00 (10 \$0 \$0.00 \$0.00 \$0.00 (10 \$0 \$0.00 \$0.00 \$0.00 (10 \$0 \$0.00 \$0.00 \$0.00 (10 \$0 <th< td=""><td></td><td>0</td><td></td><td></td><td>0</td><td>\$0.00</td><td>\$0.00</td><td>\$0.00</td></th<>		0			0	\$0.00	\$0.00	\$0.00
(59,350 \$28.78 \$28.78 \$28.78 (50 \$0 \$0.00 \$0.00 (50 \$0.00 \$0.00 \$0.00 (60 \$23.50 \$0.00 \$0.00 (70 \$0.00 \$0.00 \$0.00 (80 \$0.00 \$0.00 \$0.00 (80 \$0.00 \$0.00 \$0.00 (80 \$0.00 \$0.00 \$0.00 (90 \$0.00 \$0.00 \$0.00 (10 \$0 \$0.00 \$0.00 (10 \$0.00 \$0.00 \$0.00 (10 \$0 \$0.00 \$0.00 (10 \$0.00 \$0.00 \$0.00 (10 \$0.00 \$0.00 \$0.00 (10 \$0.00 \$0.00 \$0.00 (10 \$0.00 \$0.00 \$0.00 (10 \$0 \$0.00 \$0.00 (10 \$0.00 \$0.00 \$0.00 (10 \$0.00 \$0.00	ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
(5) 0 \$0.00 \$0.00 69,350 \$0.00 \$0.00 \$0.00 69,350 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 t	3	69,350				\$28.78	\$28.78	\$60.05
69,350 \$0.00 \$0.00 69,350 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00 4s 0 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00	Water Closets	0				\$0.00	\$0.00	\$0.00
69,350 \$28.78 \$28.78 0 0 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 4 0 \$0.00 \$0.00 0 0 \$0.00 \$0.00 0 0 \$0.00 \$0.00 1 0 \$0.00 \$0.00 1 0 \$0.00 \$0.00 1 0 \$0.00 \$0.00 1 0 \$0.00 \$0.00 2 \$0.00 \$0.00 \$0.00 3 \$0.00 \$0.00 \$0.00 4 0 \$0.00 \$0.00 5 \$0.00 \$0.00 \$0.00 6 \$0 \$0.00 \$0.00 7 \$0.00 \$0.00 \$0.00 8 \$0.00 \$0.00 \$0.00 9 \$0.00 \$0.00 \$0.00 9 \$0.00 \$0.00 \$0.00		0				\$0.00	\$0.00	\$0.00
40.00 \$0.00 \$0.00 40.00 \$0.00 \$0.00	ECO3 TOTAL:	69,350				\$28.78	\$28.78	\$60.05
0 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00	4	0				\$0.00	\$0.00	\$106.08
ds 0 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00	Urinals	0				\$0.00	\$0.00	\$0.00
ds 0 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 0 0 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00		0				\$0.00	\$0.00	\$0.00
ds 0 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 d 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00	ECO4 TOTAL:	0				\$0.00	\$0.00	\$106.08
ds 0 \$0.00 \$0.00 0 0 \$0.00 \$0.00 0 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00	5	0			0	\$0.00	\$0.00	\$0.00
0 \$0.00 \$0.00 0 0 \$0.00 \$0.00 0 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00	Shower Heads	0			0	\$0.00	\$0.00	\$0.00
t 0 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 \$0.00 t 0 \$0.00 \$0.00 \$0.00 0 0 \$0.00 \$0.00 \$0.00 0 0 \$0.00 \$0.00 \$0.00 0 0 \$0.00 \$0.00 \$0.00		0			0	\$0.00	\$0.00	\$0.00
t 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00	ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
t 0 \$0.00 \$0.00 0 0 \$0.00 \$0.00 0 0 \$0.00 \$0.00 0 0 \$0.00 \$0.00 0 0 \$0.00 \$0.00	9	0			0	\$0.00	\$0.00	\$0.00
00:0\$ \$0:00 00:0\$ <	Equipment	0			0	\$0.00	\$0.00	\$0.00
00.0\$ 00.0\$ 0 0 00.0\$ 0 0 0	Related	0			0	\$0.00	\$0.00	\$0.00
00.0\$ 0.00\$ 0 0 0 0 0 0 0 0 0 0 0 0 0 0		0			0	\$0.00	\$0.00	\$0.00
00.0\$ 0.00\$ 0 0 0		0			0	\$0.00	\$0.00	\$0.00
	ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

	FY94S EEAP FT. KNOX WAT	T. KN	OX WATER CONSERVATION STUDY	ION ST	Yau-		10)
	CALC	CULAT	ا≾ا			DATE:	31 Oct 94
FACILITY NO. :	7029		FUNCTION:	ml	Enlisted Barracks	arracks	
Occupancy:	12		Operating Hours:		15		
ECO Number	Existing Fixture System	1	Retrofited Fixture System	m	Usage	Fixtures	Water Leaks
ECO Type	Description	LPM	Description	LPM	HRS/YR	Quantity	Eliminated LPY
-	Public Lavatory	9.5	Spring Loaded Faucets	4.7	730	4	
Lavatory Sinks							
ECO1 TOTAL:		LPM		LPM		4	0
2	Service Sink	23	Install Aerators	9.5	2080		
Misc. Sinks							
FCO2 TOTAL:		- DE		<u>Б</u>	#FI /YR	-	c
~	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	2200	Ā	
Water Closets			Repair Kit	7.0	2022	-	
ECO3 TOTAL:		LPF	というないないというないである。	LPF	#FL/YR	4	0
4	Wall Mounted Flush Valve	5.68	Install 1.0 GPF Flush Valve	3.79	8700	2	
Urinals			Repair Kit				
ECO4 TOTAL:		LPM		LPM	HRS/YR	2	0
Shower Hoads							
Ollower Heads							
ECO5 TOTAL:		LPM		LPM		0	0
9							
Equipment							
Related							
ECO6 TOTAL:						0	0

Systems Engineering and Management Corporation, Knoxville, TN

FY94S EEAP FT. KNOX WA R CONSERVATION STUDY 2 OF 2 CALCULATION WORK SHEET 2	0.42	as Rate: 10.51 \$/MWH Demand Rate: \$/KW	Innual Water Annual Energy Saving WATER Total Total	Saving LPY KW KWH MWH Dollar Saving Dollar Saving Dollars Invested	.820 \$434.43		1.046.820 0 0 2 \$434.43 \$459.58 \$979.20	4 \$6.99		1.684.800 0 0 4 \$6.99 \$47.47 \$9.70	\$13.88		33 440 \$13.88 \$240.19	\$13.65 \$13.65		32.886 \$127.30	00.0\$		00.0\$ 0.00\$ 0.00 0 0 0				
FY94S	Water Rate:	Gas Rate:	Annual Water A		820	0	1.046.820	1,684,800		1.684.800	33,440		33 440	32,886		32.886	0		0				•
	FACILITY NO. :	6707	ECO Number	ECO Type	1	Lavatory Sinks	ECO1 TOTAL:	2	Misc. Sinks	FCO2 TOTAL:	3	Water Closets	FCO3 TOTAL	4	Urinals	ECO4 TOTAL:	5	Shower Heads	ECO5 TOTAL:	9	Equipment	Related	

Systems Engineering and Management Corporation, Knoxville, TN

	FY94S FFAP FT	KN	EY94S FFAP ET KNOX WAT	S NOI	TIINY		10
)	CALC	ULAT	CALCULATION WORK SHEET 1			DATE:	31 Oct 94
FACILITY NO.:	7031		FUNCTION:		Training Building	uilding	
Occupancy:	2		Operating Hours:	'	6		
ECO Number	e System		Retrofited Fixture System	Ε	Usage	Fixtures	Water Leaks
ECO Type		LPM	Description	LPM	HRS/YR	Quantity	Eliminated LPY
-	Public Lavatory	9.5	Spring Loaded Faucets	4.7	130	3	
Lavatory Sinks							
ECO1 TOTAL:		LPM	一方の一方の一方の一方の一方の一方の一方の一方の一方の一方の一方の一方の一方の一	LPM	Party State of the	3	0
2							
Misc. Sinks							
ECO2 TOTAL:		LPF	14. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	LPF	#FL/YR	0	0
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	1300	3	
Water Closets			Repair Kit				
ECO3 TOTAL:		LPF	THE SAME OF THE STATE OF THE ST	LPF	#FL/YR	3	0
4	Wall Mounted Flush Valve	5.68	Install 1.0 GPF Flush Valve	3.79	1300	1	
Urinals			Repair Kit		-		
ECO4 TOTAL:		LPM		LPM	LPM HRS/YR	1	0
5							
Shower Heads							
ECO5 TOTAL:		EPM		LPM		0	0
9							
Equipment							
Related							
ECO6 TOTAL:				tega Sungia Sung Sungia Sung Sung s Sung s Sung s Sung s Sung s Sung s Sung s Sung s Sung s Sung s S	2. 10 mm	0	0

Systems Engineering and Management Corporation, Knoxville, TN

				_				7			_			-				7			1					7
2 OF 2		\$/KWH	\$/KW	Total	Dollars Invested	\$734.40	\$0.00	\$734.40	\$0.00		\$0.00	\$180.14	The state of the s		\$180.14	\$63.65		\$63.65	\$0.00		\$0.00					\$0.00
R CONSERVATION STUDY				Total	Dollar Saving	\$61.38	\$0.00	\$61.38	\$0.00		\$0.00	\$6.15			\$6.15	\$1.02		\$1.02	\$0.00		\$0.00					\$0.00
	CALCULATION WORK SHEET 2	Energy Rate:	Demand Rate:	WATER	Dollar Saving	\$58.02	\$0.00	\$58.02	\$0.00		\$0.00	\$6.15		1	\$6.15	\$1.02		\$1.02	\$0.00		\$0.00					\$0.00
N XOI	ON WO			Saving	GAS	0	0	0	0		0								0		0					0
P FT. KNOX WA	LCULAT	\$/KL	\$/MWH	Energy S	ELEC KWH			0			0										0					0
FY94S EEAF	CA	0.42	10.51	Annual	ELEC KW			0			0										0					0
FY94		Water Rate:	Gas Rate:	Annual Water	Saving LPY	139,815	0	139,815	0		0	14,820			14,820	2,457		2,457	0		0					0
		FACILITY NO.:		ECO Number	ECO Type	1	Lavatory Sinks	ECO1 TOTAL:	2	Misc. Sinks	ECO2 TOTAL:	3	Water Closets		ECO3 TOTAL:	4	Urinals	ECO4 TOTAL:	5.	Shower Heads	ECO5 TOTAL:	9	Equipment	Related		ECO6 TOTAL:

Systems Engineering and Management Corporation, Knoxville, TN

	FY94S EEAP FT	I. KN	. KNOX WAT	S NO	TUDY		10
	CALC	CULAT	X S			DATE:	31 Oct 94
FACILITY NO.:	7041		FUNCTION:	• 1	Training Building	uilding	
Occupancy:	20		Operating Hours:	,	16		
ECO Number	Existing Fixture System		Retrofited Fixture System	u	Usage	Fixtures	Water Leaks
ECO Type	Description	LPM	Description	LPM	HRS/YR	Quantity	Eliminated LPY
1	Public Lavatory	17	Spring Loaded Faucets	4.7	130	3	
Lavatory Sinks							
- TOT 400		MO		- DAM:		~	
ECOI 101AL.		E L'L		, L. F 1Wi		2)
2							
MISC. SILIKS							
ECO2 TOTAL:		LPF		Hd7	#FL/YR	0	0
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	3000	3	
Water Closets			Repair Kit				
ECO3 TOTAL:		LPF	The second secon	LPF	#FL/YR	3	0
4	Wall Mounted Flush Valve	5.68	Install 1.0 GPF Flush Valve	3.79	13000	-	
Urinals			Repair Kit				
ECO4 TOTAL:		LPM	A The Company of th	LPM	HRS/YR	-	0
5							
Shower Heads						and the second s	
ECO5 TOTAL:		LPM		LPM	か成り 観光な である。 ・ 物の ・ のの ・ のの ・ のの ・ のの ・ のの ・ のの ・ のの	0	0
9							
Equipment							
Related							
ECO6 TOTAL:						0	0

Systems Engineering and Management Corporation, Knoxville, TN

	FΥ9	FY94S EEA	P FT. KI	W XON	RCONSER	P FT. KNOX WA R CONSERVATION STUDY	2 OF 2
		C	LCULAT	IOM NOI	CALCULATION WORK SHEET 2		
FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
	Gas Rate:	10.51	\$/WWH		Demand Rate:		\$/KW
ECO Number	Annual Water	Annual	Energy 8	Saving	WATER	Total	Total
ECO Type	Saving LPY	ELEC	ELEC KWH	GAS	Dollar Saving	Dollar Saving	Dollars invested
-	315,315			-	\$130.86	\$138.43	\$734.40
Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
ECO1 TOTAL:	315,315	0	0	-	\$130.86	\$138.43	\$734.40
2	0			0	\$0.00	\$0.00	\$0.00
Misc. Sinks							
ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
3	34,200				\$14.19	\$14.19	\$180.14
Water Closets							
ECO3 TOTAL:	34,200				\$14.19	\$14.19	\$180.14
4	24,570				\$10.20	\$10.20	\$63.65
Urinals							
ECO4 TOTAL:	24,570				\$10.20	\$10.20	\$63.65
2	0			0	\$0.00	\$0.00	\$0.00
Shower Heads							
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
9							
Equipment							
Related							
ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN-

	FY94S EEAP FT. KNOX WAT	r. KN	X WAT CONSERVATION STUDY	S NOI	TUDY		10
	CALCL	SULAT	지			DATE:	31 Oct 94
FACILITY NO.:	7104		FUNCTION:	-1	Admin Facility	ility	
Occupancy:	3		Operating Hours:	•	1		
ECO Number	Existing Fixture System		Retrofited Fixture System	n	Usage	Fixtures	Water Leaks
ECO Type	Description	Md7	Description	LPM	HRS/YR	Quantity	Eliminated LPY
	Public Lavatory	17	Spring Loaded Faucets	4.7	130	3	15800
Lavatory Sinks							
ECO1 TOTAL:		LPM	いった のから 神経 の 一般の かいこう かいしゅう かいしゅう	LPM		3	15800
2	Service Sink	23	Install Aerators	9.5	130	1	
Misc. Sinks							
ECO2 TOTAL:		LPF		LPF	#FL/YR	-	0
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	1300	3	
Water Closets			Repair Kit				
		ב ב	- A - A - A - A - A - A - A - A - A - A	ן מבי	GN:I⊒#		
ECO3 TOTAL:		7		בנו	#7171#		0
4 Urinals	Wall Mounted Flush Valve	5.68	Install 1.0 GPF Flush Valve Repair Kit	3.79	1300	4	
ECO4 TOTAL:		LPM	(A) (大学の) (A) (A) (A) (A) (A) (A) (A) (A) (A) (A	LPM	HRS/YR	4	0
5							and the same of th
Shower Heads							
		200	- の一般を観光の音楽の一句を表しています。 いっこう アンドラー・アン・アン・アン・アン・アン・アン・アン・アン・アン・アン・アン・アン・アン・	I DIM	Liste Control of the	-	
ECOS IOTAL:		N L			Salar View Salar Sand	,	
9							
Equipment							
Related							
ECO6 TOTAL:			を		SEACH SALES	0	0

TTY NO : Water Rate: 0.42 \$/KL Energy Rate: 5/KV 10.51 \$/MWH Demand Rate: 5/KV 10.51 \$/MWH Demand Rate: 5/KV S/MWH MWH MWH MWH MWH S/0.00 S/0	TY NO. : Water Rate: 7104 Gas Rate: O Number Annual Water		_ o	Energy Rate: Demand Rate: WATER Dollar Saving \$137.41 \$0.00		_
Number Annual Water Annual Energy Saving Number Annual Water ELEC ELEC GAS Saving LPY KWH MWH MWH Saving Dollar Saving Saving LPY KWH MWH MWH Saving Dollar Saving S	Cas Rate: Cas Rate: Co Type Saving LPY 1 1 1 1 1 1 1 1 1	_	_ 0	WATER WATER Dollar Saving \$137.41 \$0.00		
O Number Annual Water Annual Energy Saving WATER Total 20 Type Saving LPY KW KWH MWH Dollar Saving Dollar Saving 10 Sinks 0 0 1 \$137.41 \$145.37 10 Sinks 0 0 1 \$145.37 2 105,300 0 0 \$0.46 3 14,820 0 0 \$0.44 \$0.46 sc. Sinks 3 14,820 \$0.46 \$0.46 \$0.46 sc. Sinks 3 14,820 \$6.15 \$6.15 \$6.15 ar Closets 10,828 \$4.08 \$4.08 \$4.08 Urinals 0 0 \$0.00 \$0.00 F 0 \$0.00 \$0.00 \$0.00 wer Heads 0 0 \$0.00 \$0.00 Foldated 0 \$0.00 \$0.00 \$0.00 TOTAL: 0 0 \$0.00 \$0.00	Number Annual Water CO Type Saving LPY 1 331,115 2 105,300 sc. Sinks 14,820 er Closets 14,820 TOTAL: 14,820 4 9,828 Urinals 4	Annual En EI EC EI EN CO 0	lő — — — — — — — — — — — — — — — — — — —	WATER Dollar Saving \$137.41 \$0.00	Total Dollar Saving	Total
Saving LPY ELEC ELEC GAS GAS MWH Dollar Saving Dollar Saving 331,115 0 0 4 \$137,41 \$145.37 331,115 0 0 1 \$137,41 \$145.37 105,300 0 0 \$0.44 \$0.46 105,300 0 0 \$0.44 \$0.46 14,820 0 0 \$6.15 \$6.15 9,828 \$4.08 \$4.08 \$4.08 9,828 \$4.08 \$4.08 \$4.08 0 0 \$0.00 \$0.00	CO Type Saving LPY 1 331,115 1 10TAL: 331,115 2 105,300 3 14,820 3 14,820 3 14,820 4 9,828 Urinals			\$137.41 \$137.41 \$0.00 \$137.41	Dollar Saving ६१४६ २७	
1 \$137.41 \$145.37 Itory Sinks 0 \$0.00 \$0.00 TOTAL: 331,115 0 0 \$0.00 2 105,300 0 0 \$0.44 \$0.46 sc. Sinks 105,300 0 0 \$0.44 \$0.46 sc. Sinks 3 14,820 \$0.44 \$0.46 sc. Sinks 3 14,820 \$0.44 \$0.46 sc. Closets 3 \$0.44 \$0.46 \$0.46 TOTAL: 14,820 \$6.15 \$6.15 \$6.15 TOTAL: 9,828 \$4.08 \$4.08 \$4.08 TOTAL: 9,828 \$4.08 \$4.08 \$0.00 wer Heads 0 0 \$0.00 \$0.00 6 Iuipment \$6.00 \$0.00 \$0.00 6 Iuipment \$0.00 \$0.00 \$0.00	1 331,115 1tory Sinks 0 2 105,300 sc. Sinks 105,300 3 14,820 a 14,820 TOTAL: 14,820 TOTAL: 9,828 Urinals			\$137.41 \$0.00 \$137.41	\$145.37	Dollars Invested
ttory Sinks 0 \$0.00 \$0.00 TOTAL: 331,115 0 0 \$0.44 \$145.37 2 1 05,300 0 0 \$0.44 \$0.46 sc. Sinks 1 4,820 0 0 \$6.15 \$6.15 TOTAL: 14,820 \$6.15 \$6.15 \$6.15 ac Closets \$6.15 \$6.15 \$6.15 Urinals \$7.08 \$4.08 \$4.08 Drinals \$6.00 \$0.00 \$0.00 wer Heads \$0 \$0.00 \$0.00 E 6 \$0.00 \$0.00 Huipment \$0.00 \$0.00 \$0.00 TOTAL: 0 0 \$0.00 \$0.00	ttory Sinks 2 2 Sc. Sinks TOTAL: 3 er Closets 4 Urinals			\$0.00		\$734.40
TOTAL: 331,115 0 0 1 \$137,41 \$145.37 2 105,300 0 0 \$0.44 \$0.46 sc. Sinks TOTAL: 105,300 0 0 \$0.44 \$0.46 TOTAL: 14,820 0 0 \$6.15 \$6.15 \$6.15 ac Closets TOTAL: 14,820 \$6.15 \$6.15 \$6.15 Urinals TOTAL: 9,828 \$4.08 \$4.08 \$4.08 FO O 0 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 wer Heads 6 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 TOTAL: 0 0 0 \$0.00 \$0.00 \$0.00 Fe 0 0 \$0.00 \$0.00 \$0.00 \$0.00 Formula in the ads 0 0 \$0.00 \$0.00 \$0.00 \$0.00 Fe 0 0 0 \$0.00 \$0.00 \$0.00 </td <td>TOTAL: 2 sc. Sinks TOTAL: 3 er Closets 4 Urinals</td> <td></td> <td></td> <td>\$137.41</td> <td>\$0.00</td> <td>\$0.00</td>	TOTAL: 2 sc. Sinks TOTAL: 3 er Closets 4 Urinals			\$137.41	\$0.00	\$0.00
2 105,300 0 \$0.44 \$0.46 sc. Sinks TOTAL: 105,300 0 0 \$0.44 \$0.46 TOTAL: 14,820 \$6.15 \$6.15 \$6.15 ac Closets TOTAL: \$6.15 \$6.15 \$6.15 TOTAL: 9,828 \$4.08 \$4.08 \$4.08 Urinals TOTAL: 9,828 \$4.08 \$4.08 TOTAL: 9,828 \$6.10 \$0.00 \$0.00 wer Heads 0 \$0.00 \$0.00 \$0.00 Iuipment 6 \$0.00 \$0.00 \$0.00 TOTAL: 0 0 \$0.00 \$0.00 Selated \$0.00 \$0.00 \$0.00	sc. Sinks TOTAL: 3 er Closets 4 Urinals			\$O 44	\$145.37	\$734.40
105,300 0 0 0 \$0.44 \$0.46 14,820 0 0 0 \$6.15 \$6.15 14,820 \$6.15 \$6.1	Sta Sta			+ r. o →	\$0.46	\$9.70
105,300	St.					
ts	ts:			\$0.44	\$0.46	\$9.70
14,820	হ			\$6.15	\$6.15	\$180.14
9,828 9,828 9,828 0 0 15 0 0 0 0 0 0 0 0 0 0 0 0 0		-				
9,828 \$4.08 \$4.08 \$4.08 \$4.08 \$4.08 \$4.08 \$4.08 \$5.00 \$0 \$0.00 \$0.				\$6.15	\$6.15	\$180.14
9,828 0 \$0.00 4s 0 \$0.00 0	Urinals			\$4.08	\$4.08	\$254.59
9,828						
SE 00.00\$				\$4.08	\$4.08	\$254.59
00.0\$ 00.00\$ \$0.00 30.00\$ 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			0	\$0.00	\$0.00	\$0.00
00.0\$ 00.0\$ 0 0 0 0	hower Heads					
00.08		0		\$0.00	\$0.00	\$0.00
00 08	9					
00.08	Equipment					
00 0\$ 00 0 0 0	Related					
	O6 TOTAL: 0	0	0	\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

	FY94S EEAP FT. KNOX WAT	r. KN	DX WAT R CONSERVATION STUDY	S NO	ruby		10
	CALC	SULAT	뙷			DATE:	31 Oct 94
FACILITY NO.:	7392		FUNCTION:	'	Enlisted Barracks	arracks	
Occupancy:	43		Operating Hours:	'	15		
ECO Number	Existing Fixture System Description	P	Retrofited Fixture System Description	n PM	Usage HRS/YR	Fixtures Quantity	Water Leaks Eliminated LPY
1	Public Lavatory	17	Spring Loaded Faucets	4.7	730	9	
Lavatory Sinks							
ECO1 TOTAL:		LPM		LPM		9	0
2							
Misc. Sinks							
. 14101		1 DE		100	αΛ 13#		C
ECU2 101AL.	Floor Mounted Flush Valve	17	Install 3.5 GPF Flish Valve	13.2	8000	4	
Water Closets		-		1.0			
ECO3 TOTAL:		LPF		LPF	#FL/YR	_	0
4	Wall Mounted Flush Valve	5.68	Install 1.0 GPF Flush Valve	3.79	23000	3	
Urinals			Repair Kit				
ECO4 TOTAL:		LPM		LPM	HRS/YR	က	0
5							
Shower Heads							
FCO5 TOTAL:		LPM		LPM		0	0
9							
Equipment							
Related							
ECO6 TOTAL:						0	0

SYSTEMS CORP

	FY9	4S EEA	P FT. KN	NOX WA	R CONSER	FY94S EEAP FT. KNOX WA R CONSERVATION STUDY	2 OF 2	
		ζ)	LCULAT	ION WO	CALCULATION WORK SHEET 2			
FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH	
7860	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW	
ECO Number	Annual Water	Annual	Energy 8	Saving	WATER	Total	Total	1
ECO Type	Saving LPY	ELEC	ELEC	GAS	Dollar Saving	Dollar Saving	Dollars Invested	
1	2			8	\$1,469.61	\$1,554.68	\$1,468.80	_
Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00	
FCO1 TOTAL	3.541.230	0	0	8	\$1.469.61	\$1,554.68	\$1,468.80	Τ-
2	0			0	\$0.00	\$0.00	\$0.00	1
Misc. Sinks								
ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00	Ţ
3	121,600				\$50.46	\$50.46	\$240.19	
Water Closets								
ECO3 TOTAL:	121,600				\$50.46	\$50.46	\$240.19	77
4	130,410				\$54.12	\$54.12	\$190.94	i
Urinals								1
ECO4 TOTAL:	130,410	-			\$54.12	\$54.12	\$190.94	П
5	0			0	\$0.00	\$0.00	\$0.00	1
Shower Heads								ı
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00	П
9								i
Equipment								Ī
Related								- ;
ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00	Т
								1

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10	31 Oct 94			Water Leaks	Eliminated LPY		0		C			0			0			0				0	
	DATE:	rracks		l	ntity	9	9		c		r	4	3		8			0				0	
ruby		Enlisted Barracks	15		(R	730			#FI /YR		200	#FL/YR	23000		HRS/YR			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					
ON ST		ш	I	٦	LPM	4.7	LPM		3d	130	7.0.	H H H	3.79		 LPM			LPM					
FY94S EEAP FT. KNOX WATER CONSERVATION STUDY	CULATION WORK SHEET 1	FUNCTION:	Operating Hours:	Retrofited Fixture System	Description	Spring Loaded Faucets				Install 3 5 CDF Flush Valva	Repair Kit		Install 1.0 GPF Flush Valve	Repair				不是一个人,他们也是一个					
T. KNC	CULATI			1 1	LPM	17	LPM		3d	1/2	=	LPF	5.68		LPM			LPM					
FY94S EEAP F	CAL	7393	43	Existing Fixture System	Description	Public Lavatory				Floor Mainted Flish Valve	NOOT MOOTHER A STAND		Wall Mounted Flush Valve										
		FACILITY NO. :	Occupancy:	ECO Number	ECO Type	1 I avatory Sinks	ECO1 TOTAL:	2 Misc. Sinks	ECO2 TOTAL:	3	Water Closets	ECO3 TOTAL :	4	Urinals	ECO4 TOTAL:	2	Shower Heads	ECO5 TOTAL:	9	Equipment	Related	ECO6 TOTAL:	

Systems Engineering and Management Corporation, Knoxville, TN

CALCULATION WORK SHEET 2 CALCULATION WORK SHEET 2 CALCULATION WORK SHEET 2 S/K/L		FY94S	EEA	P FT. KI	NOX WA	R CONSER	P FT. KNOX WA R CONSERVATION STUDY	2 OF 2
Water Rate: 0.42 \$/KL Energy Rate: \$/KV Gas Rate: 10.51 \$/MW/H Demand Rate: \$/KW Annual Water Annual Energy Saving Released and Bate: Annual Energy Saving Released and Bate: \$/KW \$/KWH WMH Page Nation of the pollar Saving Released and Bate: \$/KW \$/KWH Bate Nation of the pollar Saving Released and Bate: \$/KW \$/KWH Bate Nation of the pollar Saving Released and Bate: \$/KW \$/KWH Bate Nation of the pollar Saving Released and Bate: \$/KW \$/KWH \$/KWH Bate Nation of the pollar Saving Released and Bate: \$/KW \$/KWH			[2	LCULAT	IOM NOI	RK SHEET 2		
Annual Water	FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:	93	s/KWH
Fr Annual Water Annual Energy Saving WATER Total Saving LPY KW KWH MWH Dollar Saving Pollar Saving 8 3,541,230 0 8 \$1,554.68 8 3,541,230 0 0 8 \$1,554.68 9 0 0 0 \$0.00 \$0.00 \$0.00 121,600 0 0 \$50.00 \$50.00 \$50.46 \$50.46 121,600 121,600 \$50.46 \$50.46 \$50.46 \$50.46 \$50.46 130,410 \$50.40 \$50.00 \$50.00 \$50.00 \$50.00 \$50.00 ds 0 0 0 \$50.00 \$50.00 \$50.00 ds 0 0 \$6.00 \$50.00 \$50.00 \$50.00		Gas Rate:	10.51	\$/MWH		Demand Rate:		8/KW
ks ELEC ELEC GAS GAS BA1,230 B \$1,469.61 \$1,554.68 ks 3,541,230 0 0 \$1,469.61 \$1,554.68 ks 0 0 \$0.000 \$1,654.68 s 0 0 0 \$1,469.61 \$1,554.68 s 0 0 0 \$0.000 \$0.000 s 0 0 0 \$0.000 \$0.000 ts 121,600 \$50.46 \$50.46 \$50.46 ts 130,410 \$54.12 \$54.12 \$54.12 ds 0 0 \$0.00 \$0.00 t 0 \$6.00 \$6.00 ds 0 \$0.00 \$0.00 ds 0 \$0.00 \$0.00 t 0 \$0.00 \$0.00	ECO Number	Annual Water	ल		Saving	WATER	Total	Total
ks 3,541,230 8 \$1,469.61 \$1,554.68 3,541,230 0 0 \$0.00 \$0.00 s 0 0 \$1,554.68 s 0 0 \$0.00 \$0.00 ts 121,600 \$0 0 \$50.46 \$50.46 ts 130,410 \$50.46 \$50.46 \$50.46 to 0 0 \$54.12 \$54.12 ds 0 0 \$50.00 \$0.00 t 0 0 \$50.00 \$50.00 t 0 0 \$6.00 \$6.00 t 0 \$0.00 \$0.00 \$0.00	ECO Type		ELEC KW	ELEC KWH	GAS MWH	Dollar Saving	Dollar Saving	Dollars Invested
ks 0	1	3,541,230			8	\$1,469.61	\$1,554.68	\$1,468.80
3,541,230 0 8 \$1,469.61 \$1,554.68 s 0 0 \$0.00 \$0.00 s 0 0 \$0.00 \$0.00 ts 121,600 \$50.46 \$50.46 ts 121,600 \$50.46 \$50.46 ts 130,410 \$54.12 \$54.12 ds 0 0 \$0.00 \$0.00 t 0 0 \$0.00 \$0.00	Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
\$ 0 0 0 \$0.0	ECO1 TOTAL:	3,541,230	0	0	8	\$1,469.61	\$1,554.68	\$1,468.80
ts	2	0			0	\$0.00	\$0.00	\$0.00
ts 121,600 0 0 \$0.00 121,600 \$50.46 121,600 \$50.46 130,410 \$54.12 0 0 0 \$0.00 t	Misc. Sinks							
ts	ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
ts	3	121,600				\$50.46	\$50.46	\$240.19
121,600 \$50.46 130,410 \$54.12 0 \$0.00 ds 0 0 0 \$0.00 t 0 0 0 \$0.00	Water Closets							
130,410 \$54.12 130,410 0 \$50.00 ds 0 0 0 \$50.00 t t 0 0 0 \$50.00	ECO3 TOTAL:	121,600				\$50.46	\$50.46	\$240.19
130,410 \$54.12 0 \$0.00 ds 0 0 0 \$0.00	4	130,410				\$54.12	\$54.12	\$190.94
130,410 \$54.12 0 0 \$0.00 t 0 0 0 \$0.00 t 0 0 0 \$0.00	Urinals							
ds 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ECO4 TOTAL:	130,410				\$54.12	\$54.12	\$190.94
ds 0 0 0 \$0.00 t 0 0 0 0 \$0.00	5	0			0	\$0.00	\$0.00	\$0.00
00.00\$ 0 0 0 0	Shower Heads							
0 0 0 0 0 0 0	ECOS TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
0000\$	9							
0000\$ 0 0 0	Equipment		And the second s					
00.0\$ 0 0 0	Related							
00.0\$ 0 0 0 0								
	ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

	FY94S EEAP FT. KNOX WAT	F. KN	DX WAT & CONSERVATION STUDY	S NOI	TUDY		10
	CALC	SULAT	쑀			DATE:	29 Oct 94
FACILITY NO. :	7425		FUNCTION:	_,	Maintenance	9	
Occupancy:	10		Operating Hours:	,	80	·	
ECO Number	Existing Fixture System	740	Retrofited Fixture System	8	Usage	Fixtures	Water Leaks
ECU Iype 1	Description Public Lavatory	15 15	Spring Loaded Faucets	4.7	730	4 dall 1	Ellilliated LF 1
Lavatory Sinks							
ECO1 TOTAL:		LPM		LPM		1	0
2 Misc. Sinks	Service Sink	30	Install Aerators	9.5	730	-	
ECO2 TOTAL:		LPF		LPF	#FL/YR	-	0
3 Water Closets	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve Repair Kit	13.2	18250	-	
ECO3 TOTAL:		LPF		LPF	#FL/YR	-	0
4 Urinals							
ECO4 TOTAL:		LPM		LPM	HRS/YR	0	0
5 Shower Heads							
ECO5 TOTAL:		LPM		LPM		0	0
6 Equipment Related							
ECO6 TOTAL:						0	0

Systems Engineering and Management Corporation, Knoxville, TN

CULATION WORK SHEET 2 \$/KL Energy Rate: \$/KW \$/MVVH Demand Rate: \$/KW ELEC GAS WATER Total KWH MWH Dollar Saving WATER \$/KW ELEC GAS WATER Total \$/KW WH \$208.58 \$221.86 \$/KW 0 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 0 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00		FY9	FY94S EEAP		FT. KNOX WA	R CONSER	R CONSERVATION STUDY	2 OF 2
Water Rate: 0.42 \$/KL Energy Rate: \$/KL \$/KWNMH Permand Rate: \$/KWNMM \$/KMMM			CA	LCULAT	ION WO	R SHEET 2		
Cas Rate: 10.51 \$\text{MWM}\$ Demand Rate: \$\text{MWM}\$ \$\text{Carbon Saving Saving Saving Saving Saving Saving LPY KW KWH MWH Dollar Saving Sol.00 \$\text{MMM}\$ \$\text{MATER}\$ \$\text{Total Including Saving Saving Saving Sol.00} \$\text{LEC}\$ \$\text{GAS}\$ \$\text{SO.00}\$ \$\text{SO.00}\$<	FACILITY NO.: 7425	Water Rate:	0.42	\$/KL		Energy Rate:	6	ужун
er Annual Water Annual Energy Saving WATER Total saving LPC ELEC GAS S221.86 sto2,605 T \$0.00 \$0.00 ks 0 0 \$0.00 \$0.00 sto2,605 0 1 \$208.58 \$221.86 sto 0 0 \$0.00 \$0.00 sto 0 1 \$208.58 \$221.86 sto 0 0 \$0.00 \$0.00 sto 0 \$0.00 \$0.00 \$0.00 cb;350 0 \$0.00 \$0.00 \$0		Gas Rate:	1	\$/MWH		Demand Rate:		3/KW
Saving LEC ELEC GAS Dollar Saving Dollar Saving Dollar Saving Dollar Saving Dollar Saving Pollar Saving	ECO Number	Annual Water	Annual		saving	WATER	Total	Total
FOZ,605	ECO Type			ELEC	GAS MWH	Dollar Saving	Dollar Saving	Dollars Invested
145 0 50.00 1502,605 0 0 50.00 1502,605 0 0 1 \$208.58 1502,605 0 0 0 50.00 1502,605 0 0 50.00 1502,500 0 0 0 50.00 1502,500 0 0 0 0 1502,500 0 0 0 0 1502,500 0 0 0 0 1502,500 0 0 0 0 1502,500 0 0 0 0 1502,500 0 0 0 0 1502,500 0 0 0 0 1502,500 0 0 0 0 1502,500 0 0 0 0 1502,500 0 0 0 0 1502,500 0 0 0 0 1502,500 0 0 0 0 1502,500 0 0 0 0 1502,500 0 0 0 1502,500 0 0 0 0 1502,500 0 0 0 0 1502,500 0 0 0 0 1502,500 0 0 0 0 1502,500 0 0 0 0 1502,500 0 0 0 1502,500 0 0 0 0 1502,500 0 0 0 0 1502,500 0 0 0 0 1502,500 0 0 0 0 1502,500 0 0 0 0 1502,500 0 0 0 0 1502,500 0 0 0 0 0 1502,500 0 0 0 0 0 1502,500 0 0 0 0 0 1502,500 0 0 0 0 0 1502,500 0 0 0 0 0 0 1502,500 0 0 0 0 0 0 1502,500 0 0 0 0 0 0 1502,500 0 0 0 0 0 0 1502,500 0 0 0 0 0 0 1502,500 0 0	_	502,605			τ-	\$208.58	\$221.86	\$244.80
0 0 \$0.00 502,605 0 1 \$208.58 s 0 0 \$0.00 s 0 0 \$0.00 s 0 0 \$0.00 s 0 \$0.00 \$0.00 sts 0 \$0.00 \$0.00 c 0 \$0.00 \$0.00	Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
502,605 0 1 \$208.58 s 0 2 \$3.73 s 0 0 \$0.00 s 0 \$0.00 \$0.00 sts 0 \$2 \$3.73 69,350 0 \$0.00 \$0.00 sts 0 \$0.00 \$0.00 sts 0 \$0.00 \$0.00 c \$0.00 \$0.00 \$0.00 c <th< td=""><td></td><td>0</td><td></td><td></td><td>0</td><td>\$0.00</td><td>\$0.00</td><td>\$0.00</td></th<>		0			0	\$0.00	\$0.00	\$0.00
ss 697,900 2 \$3.73 s 0 \$0.00 s 0 \$0.00 s 0 \$0.00 sts 0 \$0.00 c \$0.00 \$0.00 strong \$0.00	ECO1 TOTAL:	502,605	0	0	1	\$208.58	\$221.86	\$244.80
s 0 \$0.00 s 0 \$0.00 s 0 \$0.00 s \$0.00 \$0.00 sts 0 \$0.00 s \$0.00	2	897,900			2	\$3.73	\$25.30	\$9.70
0 0 \$0.00 897,900 0 2 \$3.73 51s 69,350 0 \$0.00 51s 0 \$0.00 \$0.00 51s 0 \$0.00 \$0.00 51s 0 \$0.00 \$0.00 51s 0 \$0.00 \$0.00 69,350 0 \$0.00 \$0.00 69,350 0 \$0.00 \$0.00 60 0 \$0.00 \$0.00 60 0 \$0.00 \$0.00 61s 0 \$0.00 \$0.00 7 \$0.00 \$0.00 \$0.00 8 \$0.00 \$0.00 \$0.00 8 \$0.00 \$0	Misc. Sinks	0			0	\$0.00	\$0.00	\$0.00
897,900 0 2 \$3.73 69,350 0 \$28.78 \$28.78 sts 0 \$0.00 \$0.00 c 69,350 0 \$0.00 \$0.00 c 69,350 0 \$0.00 \$0.00 c 69,350 0 \$0.00 \$0.00 c 0 0 \$0.00 \$0.00 c 0 0 \$0.00 \$0.00 c 0 \$0 \$0.00 \$0.00 <		0			0	\$0.00	\$0.00	\$0.00
69,350 \$28.78 ets 0 \$0.00 cols \$0.00 \$0.00 cols \$0.00 \$0.00 cds 0 \$0.00 cds \$0.00 \$0.00 cds<	ECO2 TOTAL:	897,900	0	0	2	\$3.73	\$25.30	\$9.70
ets 0 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00 0 \$0.00 \$0.00 ds 0 \$0.00 ds \$0.00 \$0.00 t \$0 \$0.00 \$0 \$0.00 \$0.00 \$0 \$0.00 \$0.00	က	69,350				\$28.78	\$28.78	\$60.05
69,350 \$0.00 69,350 \$28.78 0 \$0.00 0 \$0.00 0 \$0.00 0 \$0.00 ds \$0.00 ds \$0.00 0 \$0.00 1 \$0.00 0 \$0.00 1 \$0.00 0 \$0.00 0 \$0.00 0 \$0.00 0 \$0.00 0 \$0.00 0 \$0.00 0 \$0.00 0 \$0.00	Water Closets	0				\$0.00	\$0.00	\$0.00
69,350 \$28.78 0 \$0.00 0 \$0.00 0 \$0.00 0 \$0.00 0 \$0.00 10 \$0.00 0 \$0.00 0 \$0.00 1 \$0 0 \$0.00 1 \$0.00 0 \$0.00 0 \$0.00 0 \$0.00 0 \$0.00 0 \$0.00 0 \$0.00 0 \$0.00		0				\$0.00	\$0.00	\$0.00
0	ECO3 TOTAL:	69,350				\$28.78	\$28.78	\$60.05
O	4	0				\$0.00	\$0.00	\$0.00
SO 00 SO 00	Urinals	0				\$0.00	\$0.00	\$0.00
1		0				\$0.00	\$0.00	\$0.00
Ids 0 \$0.00 1ds 0 \$0.00 1 0 \$0.00 1 0 \$0.00 1 0 \$0.00 1 0 \$0.00 1 0 \$0.00 1 0 \$0.00 2 \$0.00 \$0.00 3 \$0.00 \$0.00 4 \$0.00 \$0.00	ECO4 TOTAL:	0				\$0.00	\$0.00	\$0.00
148 0	5	0			0	\$0.00	\$0.00	\$0.00
0 0 0 \$0.00 0 0 0 \$0.00 0 0 \$0.00 0 0 \$0.00 0 0 \$0.00 0 0 \$0.00 0 0 \$0.00	Shower Heads	0			0	\$0.00	\$0.00	\$0.00
0 0 0 \$0.00 0 0 \$0.00 1t 0 \$0.00 0 0 \$0.00 0 0 \$0.00 0 0 \$0.00 0 0 \$0.00 0 0 \$0.00		0			0	\$0.00	\$0.00	\$0.00
t 0 \$0.00 t 0 \$0.00 0 \$0.00 0 \$0.00 0 \$0.00 0 \$0.00 0 \$0.00 0 \$0.00 0 \$0.00	ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
t 0 \$0.00 0 \$0.00 0 \$0.00 0 \$0.00 0 \$0.00 0 \$0.00 0 \$0.00	9	0			0	\$0.00	\$0.00	\$0.00
00.0\$ 0 0 0 \$0.00 0 \$0.00 0 0 \$0.00	Equipment	0.			0	\$0.00	\$0.00	\$0.00
00.0\$ 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Related	0			0	\$0.00	\$0.00	\$0.00
00.0\$ 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		0			0	\$0.00	\$0.00	\$0.00
00.0\$ 0 0 0 0		0			0	\$0.00	\$0.00	\$0.00
	ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

	FY94S EEAP FT.	F. KNOX WAT	CONSERVATION STUDY	STUDY		10
	CALCI	ᅐ	-		DATE:	31 Oct 94
FACILITY NO. :	7738	F	FUNCTION:	Detention Laundry	Laundry	
Occupancy:		Operatir	Operating Hours:	8	ı	
ECO Number	Existing Fixture System	Retrofited Fixture System	ure System	Usage	Fixtures	Water Leaks
ECO Type	Description L	LPM Description	n LPM	긔	Quantity	Eliminated LPY
1						
Lavatory Sinks						
ECO1 TOTAL:		LPM	FPM		0	0
2	Service Sink	45 Install Aerators		365	-	
Misc. Sinks						
				-		
ECO2 TOTAL:		LPE CONTRACTOR	SERVE LPF	F #FLYR	1	0
က						
Water Closets						
TATOL GOOD		L				¢
ECO3 IOIAL:				F #FL7 K	0	0
4						
Urinals						
	-					
ECO4 101AL:				M HKS/TK	<u>ا</u>	0
Showl actions						
Silowei Heads						
ECO5 TOTAL:	· 医医院检验 (1) 10 10 10 10 10 10 10 10 10 10 10 10 10	SEPM: The second of the second	LPM	Mark Mark Mark Mark Mark Mark Mark Mark	0	0
9						
Equipment						
Related						
FCO6 TOTAL .					0	c
				description of the state of the	2	>

Systems Engineering and Management Corporation, Knoxville, TN

	FY9	FY94S EEAP		FT. KNOX WA		R CONSERVATION STUDY	2 OF 2
		CAI	ALCULAT	OM NOI			
FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
) -	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ECO Number	Annual Water	Annual	Energy	Saving	WATER	Total	Total
ECO Type	Saving LPY	ELEC	ELEC KWH	GAS	Dollar Saving	Dollar Saving	Dollars Invested
-	0			0	\$0.00	\$0.00	\$0.00
Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
ECO1 TOTA!	C	c	c		00 09	000	00 0
201101	777 450			٦	\$0.00 \$2.22	\$0.00 40.40	90.00
Misc. Sinks	001			7	\$0.K0	14.09	99.0
ECO2 TOTAL:	777,450	0	0	2	\$3.23	\$3.41	\$9.70
3	0				\$0.00	\$0.00	\$0.00
Water Closets							
ECO3 TOTAL:	0				\$0.00	\$0.00	\$0.00
4	0				\$0.00	\$0.00	\$0.00
Urinals							
ECO4 TOTAL:	0				\$0.00	\$0.00	\$0.00
5	0			0	\$0.00	\$0.00	\$0.00
Shower Heads							
ECOS TOTAL.				c	000	000	00 04
F303 101AF.			>		00.00	90.00	00.04
Fairinment							
Related							
						and the state of t	
ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

	FY94S EEAP FT. KNOX WA	T. KNO	DX WATER CONSERVATION STUDY	S NO	TUDY		10
	CAL	CULAT	꽃			DATE:	29 Oct94
FACILITY NO. :	7741		FUNCTION:		Dining		
Occupancy:	3 Meals / Day		Operating Hours:	8:30	8:30 am to 5:30 pm	md .	
ECO Number	Existing Fixture System Description	n I PM	Retrofited Fixture System Description	n Mg	Usage HRS/YR	Fixtures	Water Leaks
1	Lavatory Faucets	9.5	Spring Loaded Faucets	4.7		30	
Lavatory Sinks							
ECO1 TOTAL:		LPM		LPM		30	0
2							
Misc. Sinks							
ECO2 TOTAL:		LPF		LPF	#FL/YR	0	0
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	10950	30	
Water Closets			Repair Kit				
ECO3 TOTAL .		<u> </u>		100		30	C
4	Wall Mounted Flush Valve	5 68	Install 1 0 GPF Flush Valve	3 79	10950	3 6	
Urinals			1 1)	
ECO4 TOTAL:		LPM		LPM	HRS/YR	9	0
5							
Shower Heads							
ECO5 TOTAL:		LPM		LPM		0	0
9		45	Install Aerators	9.5	1460	-	
Equipment	2 Comp. Sink (2 faucets)	45	Install Aerators	9.5	1460	-	
Related							
ECO6 TOTAL:			10.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.	Ą.		6	C
SYSTEMS CORP	CORP	Svetor	ne Engineering and Manager) tuen	propration		IN TAI
, 	= 0	Oyare	Systems Engineering and management Corporation,	S = iau	orporation	i, Knoxville, IN	ile, i N

Systems Engineering and Management Corporation, Knoxville, TN

	FY9	FY94S FFA	P FT K	7M XON	R CONSER	P ET KNOX WA R CONSERVATION STIIDY	2 OE 2
		73	ILCULAT	OM NOI	ALCULATION WORK SHEET 2		
FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		#/KWH
	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ECO Number	Annual Water	Annual	Energy (Saving	WATER	Total	Total
ECO Type	Saving LPY	ELEC	ELEC KWH	GAS MWH	Dollar Saving	Dollar Saving	Dollars invested
_	7,851,150			12	\$3,258.23	\$3,385.54	\$6,120.00
Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
	0	The state of the s		0	\$0.00	\$0.00	\$0.00
ECO1 TOTAL:	7,851,150	0	0	12	\$3,258.23	\$3,385.54	\$6,120.00
2	0			0	\$0.00	\$0.00	\$0.00
Misc. Sinks	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
3	1,248,300				\$518.04	\$518.04	\$1,501.20
Water Closets	0				\$0.00	\$0.00	\$0.00
	0				\$0.00	\$0.00	\$0.00
ECO3 TOTAL:	1,248,300				\$518.04	\$518.04	\$1,501.20
4	124,173				\$51.53	\$51.53	\$318.24
Urinals	0				\$0.00	\$0.00	\$0.00
	0				\$0.00	\$0.00	\$0.00
ECO4 TOTAL:	124,173				\$51.53	\$51.53	\$318.24
5	0			0	\$0.00	\$0.00	\$0.00
Shower Heads	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
9	3,109,800			5	\$12.91	\$63.33	\$8.08
Equipment	3,109,800			5	\$12.91	\$63.33	\$8.08
Related	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO6 TOTAL:	6,219,600	0	0	10	\$25.81	\$126.67	\$16.16

Systems Engineering and Management Corporation, Knoxville, TN

	FY94S EEAP FI	r. KN	F. KNOX WAT CONSERVATION STUDY	S NOI	TUDY		10
	CALC	SULAT	ス			DATE:	31 Oct 94
FACILITY NO.:	7955		FUNCTION:	·			
Occupancy:			Operating Hours:	·			
ECO Number	Existing Fixture System		Retrofited Fixture System	ш	Usage	Fixtures	Water Leaks
ECO Type	Description	LPM	Description	LPM	HRS/YR	Quantity	Eliminated LPY
-	Public Lavatory	40	Spring Loaded Faucets	4.7	130	2	
Lavatory Sinks	Public Lavatory	9.5	Spring Loaded Faucets	4.7	130	-	
ECO1 TOTAL:		LPM		LPM		3	0
2							
Misc. Sinks							
ECO2 TOTAL:		LPF		LPF	#FL/YR		0
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	1300	3	
Water Closets			Repair Kit				
ECO3 TOTAL:	1.4	LPF	19. 人名英格兰 医二甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基	LPF	#FL/YR	3	0
4	Wall Mounted Flush Valve	5.68	Install 1.0 GPF Flush Valve	3.79	1300	-	
Urinals			Repair Kit				
ECO4 TOTAL:		LPM		LPM	HRS/YR	1	0
5							
Shower Heads							
ECO5 TOTAL:		LPM		LPM		0	0
9							
Equipment							
Related							
ECO6 TOTAL:						0	0

Systems Engineering and Management Corporation, Knoxville, TN

				_		T			_			1		_							T		!		 _
2 OF 2		\$/KWH	\$/KW	Total	Dollars Invested	\$489.60	\$244.80	\$734.40	\$0.00		\$0.00	\$180.14			\$180.14	\$63.65		\$63.65	\$0.00		\$0.00				\$0.00
FY94S EEAP FT. KNOX WA R CONSERVATION STUDY		₩		Total	Dollar Saving	\$249.81	\$20.46	\$270.27	\$0.00		\$0.00	\$6.15			\$6.15	\$1.02		\$1.02	\$0.00		\$0.00				\$0.00
R CONSER	CALCULATION WORK SHEET 2	Energy Rate:	Demand Rate:	WATER	Dollar Saving	\$236.14	\$19.34	\$255.48	\$0.00		\$0.00	\$6.15			\$6.15	\$1.02		\$1.02	\$0.00		\$0.00	3			\$0.00
NOX W	OM NO			Saving	GAS MWH	_	0	-	0		0								0		0				0
FT. KI	LCULAT	\$/KL	\$/MWH	Energy 5	ELEC KWH			0			0										0				0
IS EEAF	CA	0.42	10.51	Annual	ELEC KW			0			0									and the state of t	0				0
FY94		Water Rate:	Gas Rate:	Annual Water	Saving LPY	569,010	46,605	615,615	0		0	14,820			14,820	2,457		2,457	0		0				0
		FACILITY NO.: 7955		ECO Number	ECO Type	-	Lavatory Sinks	ECO1 TOTAL:	2	Misc. Sinks	ECO2 TOTAL:	3	Water Closets		ECO3 TOTAL:	4	Urinals	ECO4 TOTAL:	9	Shower Heads	ECO5 TOTAL:	9	Equipment	Related	ECO6 TOTAL:

Systems Engineering and Management Corporation, Knoxville, TN

	EVOAS EEAD ET		KNOY WAT CONSEDVATION STIIDS	ONC	YOUT		10
	1 1340 EEAL		WALES CONSTINATION		- 0 0		
	CALC	COLAT	CALCULATION WORK SHEET 1			DATE:	31 Oct 94
FACILITY NO. :	7956		FUNCTION:	•	Pool		
Occupancy:	497 (max)		Operating Hours:	,	8		
ECO Number	Existing Fixture System		Retrofited Fixture System	m	Usage	Fixtures	Water Leaks
ECO Type	Description	LPM	Description	LPM	HRS/YR	Quantity	Eliminated LPY
1	Public Lavatory	9.5	Spring Loaded Faucets	4.7	180	12	
Lavatory Sinks							
ECO4 TOTAL		MQ I		DM		13	C
ECOL IOLAE.		ELL IS		ž L		7	
2 Misc Sinke							
2000							
ECO2 TOTAL:		LPF	A Maria Company of the Company of th	LPF	#FL/YR	0	0
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	2200	12	
Water Closets			1 . 1				
ECO3 TOTAL:		LPF		LPF	#FL/YR	12	0
4	Wall Mounted Flush Valve	2.68	Install 1.0 GPF Flush Valve	3.79	8000	9	
Urinals			Repair Kit				
ECO4 TOTAL:	(数数) (1) (1) (1) (1) (1) (1) (1) (1) (1) (1	LPM		LPM	HRS/YR	9	0
5							
Shower Heads							
ECO5 TOTAL:		LPM	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	LPM	*************************************	. 0	0
9							
Equipment							
Related							
ECO6 TOTAL:				10.00		0	0
F							

Systems Engineering and Management Corporation, Knoxville, TN

FACILITY NO.: W							
	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
•	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ECO Number	Annual Water	Annual	Energy S	Saving	WATER	Total	Total
ECO Type	Savina LPY	ELEC		GAS	Dollar Saving	Dollar Saving	Dollars Invested
T	9			2	\$321.36	\$339.96	\$2.937.60
Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
ECO1 TOTAL:	774,360	0	0	2	\$321.36	\$339.96	\$2.937.60
2	0			0	\$0.00	\$0.00	\$0.00
Misc. Sinks							
ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
3	100,320				\$41.63	\$41.63	\$720.58
Water Closets							The state of the s
ECO3 TOTAL:	100,320				\$41.63	\$41.63	\$720.58
4	90,720				\$37.65	\$37.65	\$381.89
Urinals							
ECO4 TOTAL:	90,720				\$37.65	\$37.65	\$381.89
5 Shower Heads	0			0	\$0.00	\$0.00	\$0.00
						7.00	
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
6 Equipment Related							
ECO6 TOTAL:	0	0	C	c	\$0.00	\$0.00	00 0\$
	1	,	,		00:00	00.00	00.00

Systems Engineering and Management Corporation, Knoxville, TN

	FY94S EEAP FT. KNOX WA	T. KN	OX WALR CONSERVATION STUDY	S NO	TUDY		10
	CALC	CULAT	ומו			DATE:	29 Oct 94
FACILITY NO. :	7959		FUNCTION:	•	NCO/Dining	ğ	
Occupancy:	3 Meals / Day		Operating Hours:	·			
ECO Number	Existing Fixture System		Retrofited Fixture System	Е	Usage	Fixtures	Water Leaks
ECO Type	Description	LPM	Description	LPM	HRS/YR	Quantity	Eliminated LPY
-	Lavatory Faucets	9.5	Spring Loaded Faucets	4.7	730	9	
Lavatory Sinks							
ECO1 TOTAL:		LPM		LPM		9	0
2							
Misc. Sinks		,					
ECO2 TOTAL:		LPF		LPF	#FL/YR	0	0
က	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	10950		
Water Closets			Repair Kit				
ECO3 TOTAL .		- 05		L		,	
FCO3 - C-AL.		רענ		7	#FLYR	`	0
4	Wall Mounted Flush Valve	5.68	Install 1.0 GPF Flush Valve	3.79	10950	2	
Urinals			Repair Kit				
ECO4 TOTAL:		LPM	1、1000年の日本の日本の日本の日本の日本の日本の日本の日本の日本の日本の日本の日本の日本の	Md	HRS/YR	2	0
5							
Shower Heads							
ECO5 TOTAL:		LPM		Md I	200 200 200 200 200 200 200 200 200 200	c	U
9	3 Comp. Sink (2 faucets)	15	Install Aerators	9.5	730		
Equipment							
Related							
ECO6 TOTAL:		(4) (2) (4) (4)				-	C

Systems Engineering and Management Corporation, Knoxville, TN

	FΥg	FY94S EEAP FT. KNOX WA	P FT. K	NOX WA		R CONSERVATION STIIDY	2 OE 2
		CA	LCULAT	ION WOF	X		
FACILITY NO.: 7959	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
,	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ECO Number	Annual Water	Annual	Energy 5	Saving	WATER	Total	Total
ECO Type	Saving LPY	ELEC KW	ELEC KWH	GAS	Dollar Saving	Dollar Saving	Dollars Invested
_	1,570,230			2	\$651.65	\$677.11	\$1,224.00
Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO1 TOTAL:	1,570,230	0	0	2	\$651.65	\$677.11	\$1,224.00
2	0			0	\$0.00	\$0.00	\$0.00
Misc. Sinks	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
က	291,270				\$120.88	\$120.88	\$350.28
Water Closets	0				\$0.00	\$0.00	\$0.00
					\$0.00	\$0.00	\$0.00
ECO3 TOTAL:	291,270				\$120.88	\$120.88	\$350.28
4	41,391				\$17.18	\$17.18	\$106.08
Urinals	0				\$0.00	\$0.00	\$0.00
	0				\$0.00	\$0.00	\$0.00
ECO4 TOTAL:	41,391				\$17.18	\$17.18	\$106.08
22	0			0	\$0.00	\$0.00	\$0.00
Shower Heads	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
ဖ	240,900			0	\$1.00	\$4.91	\$8.80
Equipment	0			0	\$0.00	\$0.00	\$0.00
Related	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
	0			0	\$0.00	\$0.00	\$0.00
ECO6 TOTAL:	240,900	0	0	0	\$1.00	\$4.91	\$8.80

Systems Engineering and Management Corporation, Knoxville, TN

ULATION WORK LPM Betrofi 9.5 Spring L LPF R 17 Install 1.0 5.68 Install 1.0 LPM R		FY94S EEAP FI	F KN	F. KNOX WAT R CONSERVATION STUDY	S NO	TUDY		10
100 Operating Hours: 100 Operating Hours: 100 Operating Hours: 201 Operating Hours: 202 Operating Hours: 202 Operating Hours: 203 Operating Hours: 203 Operating Hours: 204 Operating Hours: 204 Operating Hours: 205 Operating Hours: 206 Operating Hours: 206 Operating Hours: 206 Operating Hours: 207 Operating Hours: 208 Operating Hou		CALC	ULAT	ION WORK SHEET 1			DATE:	31 Oct 94
100 Operating Hours: System Retrofited Fixture System Description LPM Description LPM Description LPM HRS/YR Quantity LPM Description LPM HRS/YR Quantity LPM HRS/YR Quantity LPM Repair Kit LPM RPM R	FACILITY NO. :	9261		FUNCTION:	- 1	Training B	uilding	·
Existing Fixture System Retrofited Fixture System Usage Fixtures	Occupancy:	100		Operating Hours:	'			
Description LPM Description LPM HRS/YR Quantity	ECO Number	Existing Fixture System		Retrofited Fixture Syster	m	Usage	Fixtures	Water Leaks
Public Lavatory 9.5 Spring Loaded Faucets 4.7 130 4	ECO Type	Description	LPM	Description	LPM	HRS/YR	Quantity	Eliminated LPY
LPM	1	Public Lavatory	9.2	Spring Loaded Faucets	4.7	130	4	
LPF	Lavatory Sinks							
Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 4000 8	- 4 - 0 - 0							
Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 4000 8	ECO1 IOIAL:		٦ ع		L	kati Kati Kati		0
Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 4000 8	2							
Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 4000 8	Misc. Sinks							
Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 4000 8	ECO2 TOTAL.		1 0 1		1 05	#EI*/VD	c	c
Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 4000 8	E002 101AE:		; ;				,	
Sepair Kit LPF	3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	4000	ω	
Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 10000 14 S Repair Kit LPM HRS/YR 14 S LPM HRS/YR 14 LPM LPM 0	Water Closets			Repair Kit				
Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 10000 14 LPM Repair Kit LPM HRS/YR 14 S LPM HRS/YR 14 LPM LPM 00	ECO3 TOTAL:		H H	A Company of the Comp	Hd 1	#FI-MR	@	0
S LPM HRS/YR 14 LPM HRS/YR 14 LPM HRS/YR 0	4	1	5.68	Install 1.0 GPF Flush Valve	3.79	10000	14	
S	Urinals			Repair Kit				
S LPM HRS/YR 14 LPM HRS/YR 0 LPM STATE OF STA								
	ECO4 TOTAL:	B. C. Carlotte, and the second	LPM		LPM	HRS/YR		0
	5							
	Shower Heads							
	ECO5 TOTAL:		LPM	The second secon	LPM	1 X 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		0
	9							
	Equipment							
	Related							
				The state of the s			Í	
	ECO6 TOTAL:						0	0

Systems Engineering and Management Corporation, Knoxville, TN

	FY9	FY94S EEAP FT. KNOX WA	P FT. KI	M XON	3	R CONSERVATION STUDY	2 OF 2
		CAI	LCULAT	IOM NOI	ヒ		
FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ECO Number	Annual Water	Annual	Energy 8	Saving	WATER	Total	Total
ECO Type	Saving LPY	ELEC	ELEC KWH	GAS MWH	Dollar Saving	Dollar Saving	Dollars Invested
_	186,420			0	\$77.36	\$81.84	\$979.20
Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
ECO1 TOTAL:	186,420	0	0	0	\$77.36	\$81.84	\$979.20
2	0			0	\$0.00	\$0.00	\$0.00
Misc. Sinks							
ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
က	121,600				\$50.46	\$50.46	\$480.38
Water Closets							
ECO3 TOTAL.	121 600				CEO AG	CEO AE	\$480 38
4	264 600				\$109.81	\$109.81	\$891.07
Urinals			and the state of t				
ECO4 TOTAL:	264,600				\$109.81	\$109.81	\$891.07
5	0			0	\$0.00	\$0.00	\$0.00
Shower Heads							
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
9							
Equipment		W					
Related							
ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

	FY94S EEAP FT	r. KN(. KNOX WAT CONSERVATION STUDY	S NOI	TUDY		1 G
	CALC	SULAT	CALCULATION WORK SHEET 1			DATE:	31 Oct 94
FACILITY NO. :	9306		FUNCTION:	•	Training Building	uilding	
Occupancy:	20		Operating Hours:	•			
ECO Number	Existing Fixture System		Retrofited Fixture System	ц	Usage	Fixtures	Water Leaks
ECO Type	Description	LPM	Description	LPM	HRS/YR	Quantity	Eliminated LPY
1	Public Lavatory	15	Spring Loaded Faucets	4.7	130	9	
Lavatory Sinks							
ECO1 TOTAL .		Md		MG		u u	
]	430 1000		
Misc. Sinks							
ECO2 TOTAL:		LPF		LPF	#FL/YR	0	0
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	2000	4	
Water Closets			Repair Kit				
ECO3 TOTAL:		LPF		LPF	#FL/YR	4	0
4	Wall Mounted Flush Valve	5.68	Install 1.0 GPF Flush Valve	3.79	18000		
Urinals			Repair Kit				
ECO4 TOTAL:		LPM		FPM	LPM HRS/YR	4	0
22							
Shower Heads							
FCOS TOTAL .		Md -		<u>-</u>		c	c
9				i			
Equipment							
Related							
- 4 + O + O O C L				25.00		-	
ECOP IOIAL:					WE TO	0	0

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	FY9	FY94S EEAP		FT. KNOX WA		R CONSERVATION STUDY	2 OF 2
		CAI	ALCULAT	FION WO	1		
FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ECO Number	Annual Water	Annua	Energy	Saving	WATER	Total	Total
ECO Type	Saving LPY	ELEC KW	ELEC	GAS	Dollar Saving	Dollar Saving	Dollars Invested
	537,030			-	\$222.87	\$235.77	\$1,468.80
Lavatory Sinks	0			0	\$0.00	\$0.00	\$0.00
ECO1 TOTAL:	537,030	0	0	1	\$222.87	\$235.77	\$1,468.80
2	0			0	\$0.00	\$0.00	\$0.00
Misc. Sinks							
ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
3	76,000				\$31.54	\$31.54	\$240.19
Water Closets							
ECO3 TOTAL:	76,000				\$31.54	\$31.54	\$240.19
4	136,080				\$56.47	\$56.47	\$254.59
Urinals							
ECO4 TOTAL:	136,080				\$56.47	\$56.47	\$254.59
5	0			0	\$0.00	\$0.00	\$0.00
Shower Heads							
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
9							
Equipment							
Related							
ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

	FY94S EEAP FT. KNOX WAT	I. KN	OX WAT CONSERVATION STUDY	SNO	TUDY		10
	CALC	CULAT	치			DATE:	31 Oct 94
FACILITY NO. :	9308		FUNCTION:	,	Training Building	uilding	
Occupancy:	200		Operating Hours:	•			
ECO Number	Existing Fixture System		Retrofited Fixture System	٦	Usage	Fixtures	Water Leaks
ECO Type	Description	LPM	Description	LPM	HRS/YR	Quantity	Eliminated LPY
1	Public Lavatory	15	Spring Loaded Faucets	4.7	130	3	
Lavatory Sinks	Public Lavatory	9.5	Spring Loaded Faucets	4.7	130	11	
ECO1 TOTAL:		PM		Md	The state of the s	17	
2		i			を を は で の の の の の の の の の の の の の	<u>-</u>	
Misc. Sinks							
ECO2 TOTAL:		LPF	1000年間の大学の大学の大学の大学の大学の大学の大学の大学の大学の大学の大学の大学の大学の	LPF	#FL/YR	0	0
3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	13.2	0009	12	
Water Closets			Repair Kit				
ECO3 TOTAL:		LPF	一多名 有 最后 经 化二氯甲基苯酚 医二氯甲基酚 医二氯甲基酚	JdT	#FL/YR	12	0
4	Wall Mounted Flush Valve	5.68	Install 1.0 GPF Flush Valve	3.79	24000	6	
Urinals			Repair Kit				
ECO4 TOTAL:	化物 医克尔二氏 医神经神经 医阿勒特氏 医克里氏	LPM		LPM	HRS/YR	6	0
S.							
Shower Heads							
ECO5 TOTAL:		LPM	and the second specifical second seco	Wd7	基础设计设置等	0	0
9							
Equipment							
Related	1.00						
	1997 - 1997						
-							
ECO6 IOIAL:				1. 1. 2. 3. 3. 4. 5. 5. 5. 5. 5. 5. 5. 5. 5. 5. 5. 5. 5.		0	0

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	FY9	FY94S EEAP FT. KNOX WA	P FT. KN	NOX WA		R CONSERVATION STUDY	2 OF 2
		CA	LCULAT	ION WOF	닏		
FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ECO Number	Annual Water	Annual	Energy 5	Saving	WATER	Total	Total
ECO Type	Saving LPY	WX ELEC	ELEC KWH	GAS	Dollar Saving	Dollar Saving	Dollars Invested
1	268,515			-	\$111.43	\$117.88	\$734.40
Lavatory Sinks	512,655			-	\$212.75	\$225.07	\$2,692.80
FCO1 TOTAL:	781.170	0	0	2	\$324.19	\$342.95	\$3,427.20
2	0			0	\$0.00	\$0.00	\$0.00
Misc. Sinks							
ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
3	273,600				\$113.54	\$113.54	\$720.58
Water Closets							
ECO3 TOTAL:	273,600				\$113.54	\$113.54	\$720.58
4	408,240				\$169.42	\$169.42	\$572.83
Urinals							
ECO4 TOTAL:	408,240				\$169.42	\$169.42	\$572.83
5 Shower Heads	0			0	\$0.00	\$0.00	\$0.00
	The state of the s						
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
9							
Equipment							
Neigled							-
			,		0	000	
ECO6 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00

Systems Engineering and Management Corporation, Knoxville, TN

LPF Spring LC Sp		FY94S EEAP FT	. KN	. KNOX WAT CONSERVATION STUDY	S NOI	ruby		10
100 Operating Hours: Existing Fixture System Retrofited Fixture System Usage Fixtures Description LPM HRS/TR Quantity Usage Description LPM HRS/TR Quantity Usage Fixtures Description LPM HRS/TR Quantity Usage Fixtures Usage Fixtures Description LPM HRS/TR Quantity Usage Fixtures Usage Usag		CALC	ULAT	ON WORK SHEET 1			DATE:	31 Oct 94
Existing Fixture System Retrofited Fixture System Description LPM Description LPM Description LPM Description LPM RRS/NR Quantity	FACILITY NO. :	9309		FUNCTION:	• 1	Fraining Bu	illding	
Existing Fixture System Retrofited Fixture System Usage Fixtures	Occupancy:	100		Operating Hours:	ı			
Description LPM Description LPM HRS/YR Quantity	ECO Number	Existing Fixture System		Retrofited Fixture Syster	L	Usage	Fixtures	Water Leaks
Public Lavatory 15 Spring Loaded Faucets 4.7 130 8	ECO Type	Description		Description	LPM		Quantity	Eliminated LPY
Public Lavatory 9.5 Spring Loaded Faucets 4.7 130 1	1	Public Lavatory	15	Spring Loaded Faucets	4.7		8	
LPK	Lavatory Sinks	Public Lavatory	9.5	Spring Loaded Faucets	4.7	130	~	
LPF	CCO4 TOTAL		MO		i. DA	8	c	
Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 4000—7 Repair Kit	ECOL 101AL.				EL1	S	6	0
Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 4000—7 7	2							
Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 4000	Misc. Sinks							
Floor Mounted Flush Valve 17 Install 3.5 GPF Flush Valve 13.2 4000	ECO2 TOTAL:	(1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	LPF		_	#FL/YR	0	0
## Repair Kit LPF #FLYR 7	3	Floor Mounted Flush Valve	17	Install 3.5 GPF Flush Valve	1-	4000	7	
LPF	Water Closets			Repair Kit				
Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 24000 5	- T- C-	6 40 3 33 73	L	The state of the s				
Wall Mounted Flush Valve 5.68 Install 1.0 GPF Flush Valve 3.79 24000 5	ECO3 IOIAL:		7	· · · · · · · · · · · · · · · · · · ·	L	#FILTYK	,	O
ds LPM HRS/KR 5	4		5.68	Install 1.0 GPF Flush Valve	3.79	24000	ည	
ds LPM HRS/KR 5	Urinals			Repair Kit				
ds - Committee - C								
	ECO4 TOTAL:		LPM	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	LPM	HRS/YR	2	0
	5							
	Shower Heads							
	ECO5 TOTAL:	A CONTROL OF THE CONT	LPM	20、香香糖的多次聚合物 医阿尔克氏病 经营业 人名英格兰人名 人名英格兰人姓氏克斯曼的变体 医克耳氏病 医克耳氏病	LPM			0
	9							
	Equipment							
0 機能が発生の機能が発生の対象を対象を対象を対象を対象を対象を対象を対象を対象を対象を対象を対象を対象を対	Related					,		
	ECO6 TOTAL:	(新年) (整体の) からの (特殊の) (A) (大きない) (A) (A) (A) (A) (A) (A) (A) (A) (A) (A	<i>I</i> ;	and the second of the second o		1947年	0	0

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		A D D A	7 T 7	VAL VOIN	GEOMOCI	VATION STIDS	1 C C
	L	43 EEAT		OW NOI	CIII ATION WORK SHEET 2	CALCIII ATION WORK SHEET 2	2 05 2
FACILITY NO.:	Water Rate:	0.42	\$/KL		Energy Rate:		\$/KWH
)	Gas Rate:	10.51	\$/MWH		Demand Rate:		\$/KW
ECO Number	Annual Water	Annual	Energy 8	Saving	WATER	Total	Total
ECO Type	Saving LPY	ELEC KW	ELEC	GAS MWH	Dollar Saving	Dollar Saving	Dollars Invested
-	14			2	\$297.16	\$314.36	\$1,958.40
Lavatory Sinks	46,605			0	\$19.34	\$20.46	\$244.80
ECO1 TOTAL:	762,645	0	0	2	\$316.50	\$334.82	\$2,203.20
2	0			0	\$0.00	\$0.00	\$0.00
Misc. Sinks							
ECO2 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
3	106,400				\$44.16	\$44.16	\$420.34
Water Closets							
ECO3 TOTAL:	106,400				\$44.16	\$44.16	\$420.34
4	226,800				\$94.12	\$94.12	\$318.24
Urinals							
ECO4 TOTAL:	226,800				\$94.12	\$94.12	\$318.24
5	0			0	\$0.00	\$0.00	\$0.00
Shower Heads							
ECO5 TOTAL:	0	0	0	0	\$0.00	\$0.00	\$0.00
9							
Equipment							-
Kelated							
FCOR TOTAL:	c	c	c	c	00 08	00 03	00 0\$
ECC 1010E.	>	,	,	,	20.00	20:00	>>:O÷

Systems Engineering and Management Corporation, Knoxville, TN